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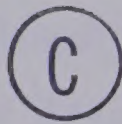




THE UNIVERSITY OF ALBERTA

T-GROUP PARTICIPATION AND CHANGE IN SELF-ORIENTATION

BY



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## ABSTRACT

The self orientation system, emphasizing the relationship between the way an individual conceives himself to be and the way in which he behaves, was examined to clarify the researchers assumptions concerning change in self orientation and to stress the importance of the concept. Some of the costs of an unrealistic self orientation were discussed. The effect of present day social structures upon the development of self orientation has been criticized to demonstrate the importance of evaluating educational environments which purport to allow participants to develop realistic orientations toward themselves.

In this study, one such educational environment, the T-group experience, was examined. The crucial learning factors, the goals and objectives, and the stages of development, all of which define the T-group experience, were discussed. A diagrammatic conceptualization for the T-group experience was presented and explained.

To test the basic postulate that T-group participants would experience change in self orientation which would not be experienced by non-participants, a quasi experimental design involving comparison between a treatment group and a control sample, was used. Experimental subjects (N=28) were *not* randomly assigned to the two experimental conditions making it necessary to test the underlying hypothesis that the two samples were from the same general population. Responses to the Personal Orientation Inventory developed by Everett Shostrom were used as pre and post treatment measures of self orientation. An analysis of covariance technique was used to test for pre treatment differences between the two samples and a main treatment effect on the group mean scores. Analysis





of variance and analysis of covariance techniques were used to test for a main treatment effect on mean change scores.

The results indicated that there was no significant treatment effect on the group mean scores. There was, however, a significant treatment effect on the group mean change scores for several of the subscales of the POI (including Self Actualizing values, Existentiality, Synergy, Acceptance of aggression, and Capacity for intimate contact), and the mean Total Change scores representing the summations of all changes in subscale raw scores for the two groups. From this, it was concluded that the T-group quite likely did contribute to changes in self orientation; but, that these changes were not all the same, nor were they in the same direction for all T-group participants, and varied widely in terms of amount of change. The members of the control sample, on the other hand, consistently demonstrated a low amount of change. Due to the experimental failure to control for the effects of selection bias and test-treatment interaction, and given the loss in reliability incurred with the use of change scores, any conclusions drawn from the results of this study must be tentative.





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## A NOTE TO THE READER

I would like to forewarn the reader that this thesis was not written as a research paper in the usual sense; and, if read as such, might prove somewhat confusing. Rather, I looked upon this thesis as my opportunity to develop, on paper, and to present for challenge, my ideas on two related concepts. I have chosen to treat this thesis as a learning experience in which I could improve my own understanding of self orientation, the T-group experience, and the research processes involved in an assessment of the general impact of T-group participation upon change in self orientation. As a consequence, I have incorporated a great deal of material which is not immediately related to the actual study reported. References are provided so that the interested reader can look further into related research literature if he questions any of the relationships presented here.



## CHAPTER ONE

## INTRODUCTION

Simply defined, self orientation is the way an individual conceives himself to be. Self orientation must be treated as an important concept in human psychology as the self orientation held by an individual will significantly influence his aspirations, behavior choices, and subjective experiencing of others. Many writers, including Perls, Hefferline, and Goodman (1951), Ellis (1963), Berne (1964), Horney (1964), Laing (1967), Perls (1969a) and Schutz (1969) have attacked western social structures for their detrimental influences upon self orientation. From my own subjective experience, I support their perceptions and argue that Canadian society characteristically fosters development of less than realistic self orientation on the part of societal members and that there is a large psychological cost and social cost attributable to this influence.

Presthus (1962) has argued that the overriding influence stems from a high social valuation attached to large scale organization and bureaucratic authority. He observed, for example, that many current child rearing practices are predicated upon preparation for participation in large bureaucratic systems. Attendance in the formal education system, employment in highly influential church systems, and, to an extent, membership in traditional family structures are all seen to be dependent upon a foundation of controlled and prescribed behaviors which meet the requirements of standardized role prescriptions. There are, in order to preserve predictability and stability within our society, narrow normative limits which define the range of legitimate behavior. It is





argued that this narrow range has dysfunctional implications for the development of reality based self orientation.

In addition, Argyris (1969) and Presthus (1962) have both observed that rationality is held to be superior to emotionality and the individual is socially reinforced for a high level of dependence upon the initiative of others. Except for a few individuals occupying positions of considerable authoritative influence, taking the initiative is generally considered to be threatening to self, others, and the established organizational structure. There is a tendency for the individual to learn to dismiss his own initiative. This may stem from a recognition of the high negative consequences involved when one acts in a non prescribed way and creates a disturbance in the normal flow of operations. In this "organizational society", the individual obtains significant reward based inducements (such as employment, promotion, security, prestige, recognition and material well being) to develop a fear of really being himself and to accept a lack of reality in his orientation toward himself.

According to Ellis (1963), there is a large psychological cost incurred as a result of this socialization process that prepares societal members for work and involvement in institutions characterized by impersonality and a rationality orientation.

"...human beings are the kinds of animals that when reared in any society similar to our own, tend to believe several major fallacious ideas: to keep indoctrinating themselves with these ideas in an unreflective, autosuggestive manner and consequently to keep actualizing them in overt behavior that is self defeating or neurotic." (Ellis, 1963, p. 59)

Our social ethic that man is most efficient when limiting his behavioral influences to cognition and social norms represents one of these fallacious values. By internalizing this and similar ideas, the individual is forced to deny many of his own private experiences of himself and his environment.



In a society replete with social structures based on the model of rationality and predictability, expression and exploration of affective experiences is taboo (Argyris, 1969). According to Luft (1963), "...everyday contacts between people are highly complex and often yield a residue of misunderstandings and emotional debris. By common un verbalized agreement, we ignore many of these minor incongruencies." (Luft, 1963, p. 33). This avoidance of exploration of many of the affective elements of interpersonal behavior leaves many aspects of self unexplored. The individual does not have the opportunity to openly relate his emotional responses and check out the reactions of others to his emotion. Berne (1964) suggests that the sublimation of both affective impulses and any efforts aimed at understanding them produces and is produced by regulated emotion and social interaction characterized by certain gaming patterns. Such games reduce awareness of self needs, inhibit psychologically functional spontaneous behavior, and impede intimacy or open and honest interpersonal contact. His book, *Games People Play*, represents a strong social inditement primarily aimed at American society yet very appropos to Canada with its branch plant economy and Americanized consumer culture.

Another value which introduces a heavy cost in terms of self orientation is that value prescribing inhibition of direct and open interpersonal feedback. Feedback, the relating to others of one's reactions to them, has limits reinforced by unwritten but commonly understood rules: mind your own business; tell others only what is safe, what they want to hear; and, avoid direct negative and positive comment on behavior. Characteristically, an individual does not obtain enough of the necessary information about the impact of his behavior - he may observe some





behavioral responses which he is left to interpret in his own way but often does not obtain full disclosure of the impact of his behavior on others. As opposed to direct and clear expressions of reaction to his behavior, the individual usually receives confusing cues implying generalized rejection, injunction to change, embarrassment, or perhaps generalized acceptance. The underlying emotional experience of the person reacting to his behavior must often be guessed at.

Each reader, from his own personal experience, may recognize previous incidents which support the perception that there is, in fact, narrow limits upon behavior, inhibition of the feedback process, a rationality orientation, and a social ethic which rewards a focus on others and implicitly punishes a focus on self. A quick remembrance of formal schooling experiences in our traditional education system should provide many examples. I think that it is safe to say that we find ourselves in a social system which has implicitly outlawed or indirectly educated restraint of behaviors which contribute toward development of reality based self orientation. These behaviors include firstly, free expression of need relevant behavior; secondly, direct and open communication of reactions to the behavior of others; thirdly, a here and now time orientation; and fourthly, a high level of self disclosure. Inhibition of any of these behaviors makes it less likely that the self orientations of the social participants will hold to reality (Jourard, 1964; Perls, Hefferline and Goodman, 1951; Schutz, 1969).

One reaction to the inhibition of these behaviors and the resultant lack of clear understanding of the consequences of one's behavior, is the development of a self orientation based upon a history of partial information and assumed successes or failures in interpersonal exchange. Unfortunately, these assumptions are not always correct. The net result,



at the micro level, is an unrealistic self orientation characterized by inappropriate self valuation, alienation from self, and distorted awareness and experience of self. Behavioral concomitants of an unrealistic self orientation have been shown to be a higher level of anxiety (Smith, 1958; Horney, 1964); a greater sense of alienation from self and others (Schactel, 1962; Weiss, 1962); a reduced effectiveness in stressful situations (Denner, 1968; Feirstein (1967) and a distortion of experience (Crary, 1968). The individual bears the psychological cost of not realizing his own potential.

At the macro or societal level, as expressed by Horney (1964), we have a generalized 'neurotic personality of our time'. With a society composed of many members operating with less than reality based self orientations, there has to be a large social cost. It is acknowledged that there is a social payoff in terms of technostucture and higher materialistic standards of living. However, when the individual psychological costs are multiplied there is a social cost which is represented by a loss of energy, innovative and creative effort, and social flexibility. The ability of this society to adapt to social changes implied by technological change is reduced. Certainly, all of the social costs attributable to this loss of reality in self orientation have yet to be determined.

#### A. Justification for Research.

Given the costs of unrealistic self orientation, expressed primarily by a loss of creativity and risk taking behavior, an inflexibility to change, and a generalized anxiety bordering on neuroticism and rigidity (Horney, 1964), some justification is provided for the investigation of educational experiences purporting to facilitate learning about self and the





development of a more realistic self orientation on the part of each participant. There is a very relevant need to determine the efficacy of such educational experiences as counseling, psychotherapy, free school education, group therapy, and the many forms of experiential education which theoretically legitimize the socially outlawed behaviors appropriate to learning about self.

#### B. Focus.

In this study, the nature and effect of one broad form of experiential education has been examined. T-group training, variously referred to as Encounter, Human Relations training, Sensitivity training, training in Interpersonal Relations, Group counseling, and Personal Growth laboratory, has been gaining in popularity as a response to the need for a learning environment fostering meaningful behavioral feedback and extensive self exploration. The T-group has become popular as an educational environment for learning about self.

According to Rubin (1967), these forms of

"...training may help a person to find in himself the natural tools that enable him to effectively cope (with his basic conflicts and anxieties). This will result, for example, from positive, non evaluative feedback, the opportunity to test ideas and beliefs (increased reality testing about oneself), and a high level of trust and openness resulting in greater authenticity. An environment is created within which there should be a reduction of an individual's need to use projective defense mechanisms which act to distort his perception of himself and others." (Rubin, 1967, p. 33)

Learning about self is to be accomplished, in T-group, via the mechanisms previously delineated as essential to the development of a reality based orientation toward self. Theoretically, in the T-group setting, free and open expression of need relevant behavior, direct and open feedback, and high levels of self disclosure are all appropriate.



As well, the T-group setting is theoretically characterized by a time orientation focussed upon the here-and-now. The T-group learning experience involves a direct confrontation with self and the values ascribed to it. The term experiential is applied to this learning experience as the focus of exploration is upon the feeling and behavioral reactions occurring during the ongoing interaction of the group. In theory, the T-group represents a mini-society which does legitimize behaviors appropriate to development of a realistic awareness, understanding and evaluation of self.

#### C. Purpose.

The object of this study was to investigate the proposition that there would be changes in self orientation occurring for participants in T-group experiences. By testing the basic postulate that the T-group is a valid learning experience for effecting change in each participant's self orientation, it was hoped that this study would lead to a greater understanding of the real value of the T-group treatment as a method for learning about self. With this improved understanding, decisions about entry into such experiences would be informed decisions. In addition, if the T-group, as a mini-society incorporating less restriction of those behaviors appropriate to realistic learning about self, is shown to be effective as a change inducing process, then some empirically supported arguments might be made for social change.

#### D. General Outline of the Study Report.

In the following chapter, self orientation is defined more explicitly and the author's assumptions surrounding the self orientation system are presented. The relationships between self orientation and behavior, as





explained in the literature, are more specifically explored in order to illustrate more clearly the behavioral costs which make this study relevant. In the third chapter, the major elements of the T-group experience, which both define it and represent crucial learning factors, are examined. As well, generalized goals and characteristic states of development are described. Several conceptualizations of the T-group experience, as presented in the literature, are outlined and a more comprehensive conceptualization of the T-group experience, which has been developed by this author, is explained. Relevant research literature regarding the observed outcomes of T-group experiences is presented in the fourth chapter with criticisms and explanations as to the limitations of study results. The actual study procedures and experimental design are presented in the fifth chapter including an explanation as to the limitations inherent in this study. The methods of analysis and the specific hypotheses which were tested are outlined in the sixth chapter. The results of this analysis for each of the hypotheses are likewise presented. In the final chapter of this study report, the results are discussed in terms of the contribution to our understanding of the effect of the T-group experience and in terms of the implications for further research generated by this study.



## CHAPTER TWO

## SELF ORIENTATION

## A. A Definition.

The definition presented by Rogers (1951) remains acceptable as a definition for the concept of self orientation;

"...self concept or self structure may be thought of as an organized configuration of perceptions of self which are admissible to awareness. It is composed of such elements as the perceptions of one's characteristics and abilities; the percepts and concepts of the self in relation to others and to the environment; the value qualities which are perceived as associated with experiences and objects; and goals and ideals which are perceived as having positive or negative valence."  
(Rogers, 1951, p. 136)

## B. The Self Orientation System.

In order to investigate self orientation change, this researcher has held to certain assumptions about the concept of self orientation. Firstly, I have assumed an individual's self orientation is changeable; secondly, that it changes in certain ways; and thirdly, that change is effected by certain influences. The framework under which I have operated is presented below.

## 1. The system

Self orientation is assumed to be learned and a function of subjective experiences of self in relation to the environment. Each individual develops and modifies his self orientation according to his perception of his involvement with and impact upon his environment. The process, being circular, can be considered to be systemic. The perceptions which





the individual holds influence his self orientation. In turn, his self orientation influences his perception, aspirations, and behavior choices.

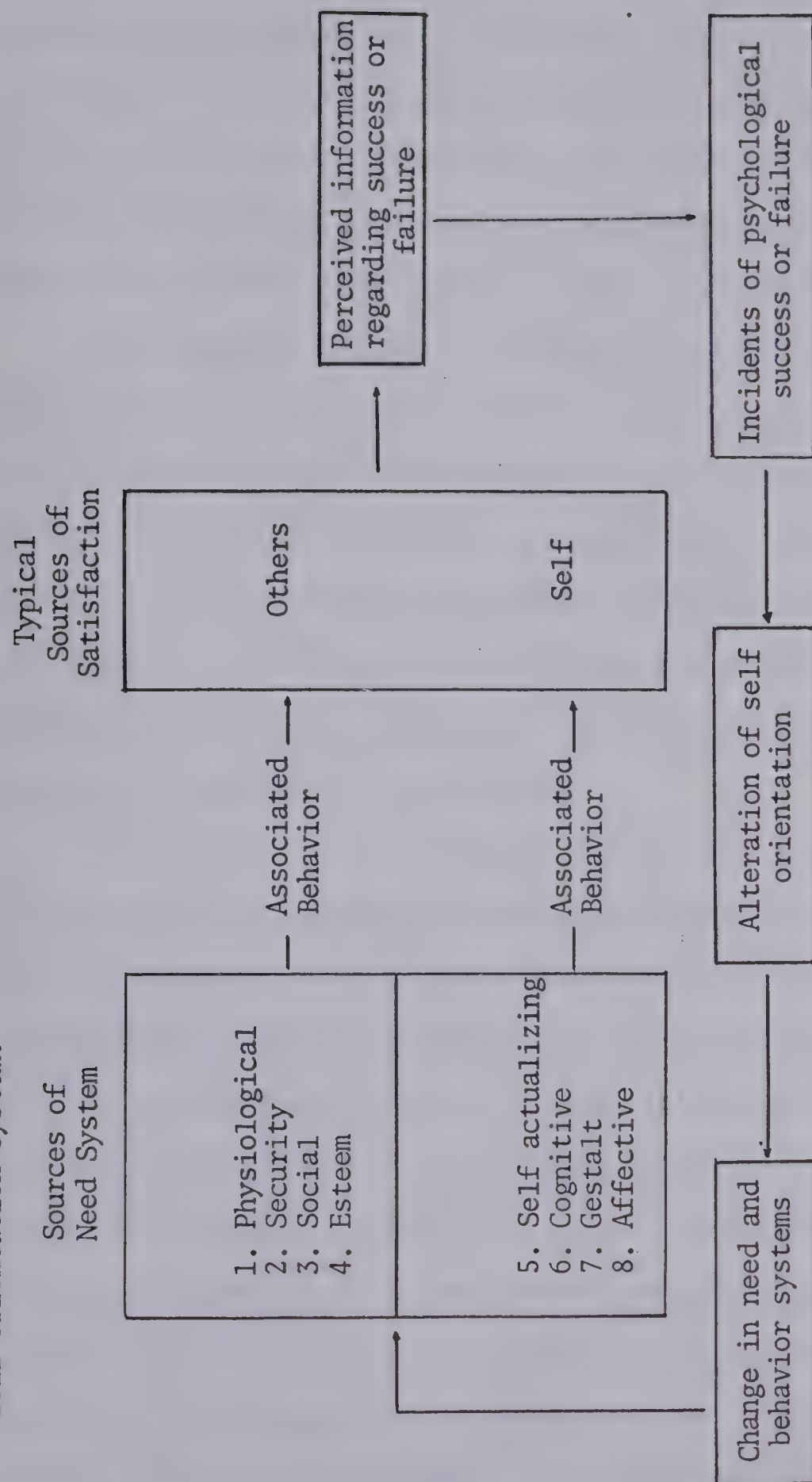
Using, for convenience, Maslow's (1954) need framework, this systemic relationship is conceptualized in Figure 1. The individual responds to his environment according to his need structure at any given moment in time. Certain needs require involvement with others and response from them in order that satisfaction be attained. Other needs, as seen by Maslow (1954), are satisfied by the behavior of the individual himself. The individual responds to his most immediate need with behavior he perceives as appropriate for him in a given situation.

The response he perceives from others and the rewards he derives from performing the act itself represent information to him about the psychological success or failure of his behavior choice. Psychological success or failure, as used here, is the individual's perception of his success or failure to attain a desired outcome. It is assumed that the self orientation an individual holds will be reinforced if he experiences psychological success. On the other hand, his self orientation will be threatened and undergo some disintegration (loss of organization) if he experiences psychological failure. Psychological success induces the individual to see himself positively in relation to the employed behavior in similar situations. Psychological failure induces the individual to see himself negatively in relation to the unsuccessful behavior and the behavioral situation.

The self orientation that develops in response to these incidents of psychological success and failure will in turn influence his need structure. If the individual experiences several significant incidents of psychological failure, then his aspiration level will be modified downward to align with his modified orientation toward self. He sees



FIGURE I. Self Orientation System.







himself as a failure in that particular behavior domain and learns to negate his own related need. Conversely, where the individual experiences psychological success, then both the behavior and the related need have a higher likelihood of reoccurrence. The individual knows that he can satisfy that need and will aspire to additional successes as long as he does not experience significant or chronic incidents of failure.

Psychological success or failure is also dependent upon the individual's perceptual field which is both influenced by and an influencer of the individual's self orientation. The individual with a learned low evaluation of self, for example, may persistently experience psychological failure despite favorable environmental response. Where the individual has learned to see himself a certain way, his perception of others is influenced by that self perception. He interprets the responses of others in terms of his own self orientation.

It is assumed that the organized interrelationships of many isolated or situational perceptions or valuations of self represents the individual's self orientation, and that some elements of self are relatively fluid (representing peripheral elements of self) and other aspects of self are relatively unchangeable representing significant or core elements of the individual's identity. Therefore, this organized concept of self is both stable and flexible, changing only as the individual's perceptions of himself, interacting in his environment, undergo change. The process of change in self orientation is assumed to be incremental as opposed to holistic. The organization is modified as the individual modifies separate situational perceptions. The individual does not experience a wholesale alteration in self orientation as he experiences psychological success or failure in relation to one or several aspects of self.



### C. Relationships Between Self Orientation and Behavior.

Self orientation has been found to relate highly to psychological adjustment, alienation, expectation and regard for others, and reactions to stress.

#### (1) Psychological adjustment and anxiety

Calvin and Holtzman (1953) found self deprecation and poor self insight to be directly associated with maladjustment. Smith (1958) determined that "...high self concept discrepancy and high self concept instability are associated with reporting feeling uneasy, grouchy, worried, nervous, groggy, shy, sad, not peppy, mentally slow, dreamy, unsociable, and sleepy." (Smith, 1958, p. 109). Karen Horney (1964), as a result of her clinical observations, concluded that basic anxiety correlates highly with emotional isolation, a feeling of intrinsic weakness of the self, and a general lack of confidence. She has observed that the individual's orientation toward self relates highly to the level of anxiety that he experiences. This persistent anxiety tends to inhibit future satisfaction of related needs, justify defensive reactions to the environment and contribute toward neurotic behavior characterized by rigidity and under-actualization of human potentialities.

Maslow (1968) cites, as two of a variety of clinically observed characteristics of healthy people, superior perception of reality and an increased acceptance of self, of others, and of nature. Both characteristics are considered to be essential to the development of an actualizing experiencing of life. Otto (1967) has indicated his agreement that it is necessary to enlarge the self concept and realistically enhance the self image in order to allow self actualization.





## (2) alienation and energy displacement

A self orientation which is not based upon the reality of the individual's capabilities, needs, and environmental impact represents an actualization of an image and not an actualization of the individual. Schactel (1962) related how he observed two frequent reactions by individuals with self orientations characterized by a generalized sense of not having found an identity acceptable to oneself. "One is an anxious retreat or depressive resignation or a mixture of these. The other is a more or less conscious effort at disguise, at playing a role, at presenting an artificial facade to the world." (Schactel, 1962, p. 75). The individual who perceives himself as something less than a desired ideal is induced by his perceptual self orientation toward either reducing his active energies or expanding them in order to maintain a less than real public image. In the words of Weiss:

"...one can at least be safe - safe perhaps by being very good and perfect and being loved for it, or by being very strong and being admired or feared for it, or by learning not to feel, not to want, not to care.

...he idealizes this self effacement as goodness, his aggression as strength, his withdrawal as freedom. Instead of developing in the direction of increasing freedom, self expression and self realization, he moves toward safety, self elimination, and self idealization." (Weiss, 1962, p. 466).

When the individual experiences this alienation from self, he characteristically expends considerable energy on striving to achieve his ideal image and on degrading himself for not yet having become his desired self.

"All available energy is used in the compulsive attempt to actualize the other, the ideal self. Too little energy is left for the developing of the real potentials of the self. The second much more active factor is the destructive force of contempt and hatred which is generated incessantly by the omnipotent idealized self image and



directed against the despicable, actual self that failed."  
(Weiss, 1962, p. 470)

Such internal displacements may be reflected in either self deprecating behavior or projected contempt for others. In either case, the individual maintains a high concern for the reaction of others. These forms of behavior require expenditures of energy in dysfunctional ways impeding the individual's ability to realize the full value of his capabilities as a creative being. The individual inhibits his natural energies, restricts his creativity and abandons his innovative efforts as these threaten the unreal equilibrium which he maintains to defend the self he perceives to be incomplete, inadequate, and weak.

As the individual pretends to be something that he knows he is not, he experiences considerable anxiety with the insecurity that his facade will be discovered by important others. To protect himself from discovery of his presentations of an unreal image of self, the individual must avoid true interpersonal contact and intimacy. To be intimate with others requires self disclosure which he has learned to fear. The individual, alienated from self, is caught in the paradox of approach avoidance; desiring greater involvement with others in order to derive a sense of meaning and significance, and yet fearing their discovery of his lack of reality. The net effect for the individual is superficial contact with others. At all costs he must avoid confrontation and emotional expression.

### (3) expectation of and regard for others

The self presentations that each individual makes can be seen as messages to his environment indicating how he expects his environment to respond to him and how he intends to respond to his environment. According to Insel, Reese and Alexander (1968) "...any





self presentation may be regarded as a set of instructions about the way the person wants to be treated and how he intends to relate to others..." (Insel *et al.*, 1968, p. 394). Phillips (1951) also found a significant correlation between self regard and regard for others. Likewise, Stock (1949), in looking at the interrelationships between the self concept and feelings directed toward others concluded that "...results of this study indicate that a definite relationship exists between the way an individual feels about himself and the way he feels about others." (Stock, 1949, p. 180). Thus, the orientation each individual has toward himself will be highly influential in determining his expectations of and regard for others.

#### (4) reactions to stress

The nature of the individual's self orientation has been found to relate to behavioral reactions in stressful situations. As the studies by Denner (1968) and Feirstein (1967) suggest, the way in which a person perceives himself in relation to his ability to cope with his environment will have a significant influence upon the way in which he behaves in stressful situations of uncertainty.

"Since individuals tend to act in accord with their self system, threats to the self system will cause a person's activities to become more and more inappropriate and rigid leading to further failure and insecurity which in turn leads to further distortions in the self system..." (Kolb and Boyatzis, 1970, p. 452)

This has been most vividly demonstrated by the 'shock administration' experiment conducted by Stanley Milgram (1964) at Yale University. Where the individual has developed an unrealistic self orientation, he can be expected to employ less than optimal and perhaps dysfunctional behavior in situations of stress. This relationship between a person's concept of self and the nature of his responses to stressful or ambiguous



situations is partially explained by the study reported by Crary (1968). Using experiences which were designed to refute the self and threaten the individual, the results obtained "...indicated that incongruity led high esteem individuals to distort in awareness aspects of the actual experience, while it caused low esteem individuals to distort more the meaning of the experience." (Crary, 1968, p. 3057). Distortion of experience can then be expected to occur where the person holds an unrealistic self concept with the most significant disturbance occurring where the person holds a low level of self valuation.

#### (5) summary

There are behavioral implications to an unrealistic self orientation. The individual experiences a persistently high level of anxiety. He fails to utilize his full capacities and expends considerable energy in trying to be what he is not. Creativity and innovative behavior tends to disappear. The individual leads a superficial interpersonal life avoiding confrontation and intimate contact. He learns to see others as negatively as he sees himself and couches his expectations of them in that perspective. The individual tends to react inappropriately and rigidly to stress.

The necessary ingredients for development of a realistic self orientation include a high degree of interpersonal feedback, a wide range of acceptable behavior, legitimation of affective expression and exploration, and reinforcement for experimentation with self. These ingredients are perceived, by this author, to be missing in the Canadian culture. Socially, there is a large cost. Given our new perceptions of the potential of man (Maslow, 1968), creativity and innovative behavior occurs infrequently relative to the number of





people making up this society. Change is resisted. Large numbers of people go on welfare rolls. Many people remain in despised jobs out of fear of the unknown. Psychological service agencies are bombarded with requests for services. New learning experiences which possess the necessary ingredients are to be encouraged and promoted. This study represents an assessment of one such learning experience.



## CHAPTER THREE

## THE T-GROUP EXPERIENCE

## A. Introduction.

Paul Buchanan (1964) has indicated that there are certain ingredients which must exist if a learning experience is to be classed as T-group training. They include, firstly, the use of a face-to-face, unstructured group as the basic learning environment. Secondly, there must be planned activities involving interaction between individuals. Thirdly, systematic and frequent feedback and analysis of information regarding what happened in the here-and-now of the T-group. And finally, learning must be reinforced by the generalization of concepts and values to out of group experiences. Bunker (1965) specifically pinpoints the experimental nature of the T-group as a definitive variable:

"A central proposition underlying laboratory education is that in the laboratory, conditions are provided under which participants may more freely experiment with behavior and find alternative ways of dealing with their interpersonal environment." (Bunker, 1965, p. 144)

In his home setting, the individual is constrained from experimentation in his two person relationships by the expectations others have developed in previous interaction. He is reinforced for predictability. In the group training situation, the individual is generally reinforced by experimentation with new behaviors and new efforts at making contact with others. Thus the T-group experience can be loosely defined as a group of people meeting for a set period of time for the purpose of learning more about themselves by participating, without traditional forms of leadership and structure, in group activities designed to focus attention on the here-and-now of interpersonal and intrapersonal issues arising in the group. Experimentation with new forms of interpersonal behavior is taken





as a group norm. The experience is characterized by a strong affective tone. The transferability of learnings about self to the back home situation usually becomes a focus during the last T-group session. A T-group experience may vary in time length from 2 hours to several weeks.

T-group is a concept which remains difficult to delimit by definition. Essentially, the T-group experience is defined by the crucial learning factors inherent in its nature, the goals and objectives ascribed to it and its characteristic stages of development. The concept remains very general and it is recognized that there are many variations to be found between T-group experiences.

The remainder of this chapter is devoted to a more elaborate examination of the ingredients of a T-group experience, the goals and objectives, and the various stages of development. Several models presented in the literature as conceptualizations of the T-group experience are outlined and criticized. A more comprehensive and explanatory conceptualization of the T-group learning experience is presented and explained.

## B. Crucial Learning Factors

Bradford (1964) has identified what he considers to be central learning factors inherent in the T-group experience: "a, the ambiguous situation; b, the identity stress; c, self investment or participation; d, collaboration and learning from peers; e, motivation for learning; f, experienced behavior and feedback; g, group growth and development; and h, trainer intervention." These learning factors are very similar to the elements considered by Landsman (1967) and Rokeach (1968) to be necessary if change in self orientation is to be effected. The list proposed by Bradford (1964) can be compressed to include four crucial learning components potentially available in any T-group experience. These



include the here-and-now orientation, trust and collaboration, self disclosure and feedback, and modelling. Change in self orientation will be a function of the prevalence of each of these learning factors.

### 1. The here-and-now orientation.

The focus in the T-group is upon behavior and feeling reactions which occur in the group. The here-and-now orientation significantly enhances the personal relevance of the learning experience as each individual is directly involved with the data to be processed. The tendency to talk about general behavior and reactions in there-and-then situations is usually subverted early in the life of each T-group as the membership experiences boredom with and resentment over the general lack of meaningful interpersonal contact. As the efforts at a focus upon there-and-then data are frustrated by rejection from the trainer or other group members, a high degree of affective arousal generally occurs.

The ambiguity created by the lack of traditional structures in the group and the resentments that are generated in response to superficial involvements will often contribute to a significant degree of anxiety. This affective involvement in the here-and-now situation contributes to the development and recognition of states of inconsistency necessary to an orientation toward change. Many argue that the focus on here-and-now represents one of the most significant learning factors and use this argument to justify establishing the laboratory experience in a culturally isolated setting (Luft, 1963). Conversely Bunker and Knowles (1967) have suggested that:

"Although the T-group is a significant factor in integrating new responses into the personality, it is often antithetical to the integration of new responses into the back home situation. The emphasis on the immediate interpersonal relationships and the negation of outside social forces preclude the discussion of





back home problems." (Bunker and Knowles, 1967, p. 521).

Usually, early in the life of the T-group, participants reject any efforts on the part of others to discuss there-and-then issues. The group moves toward the intensive focus upon observable behaviors and shared feelings present in the group. As the group approaches its conclusion date, the participants tend to become oriented toward translating their learnings (which they have accrued in the here-and-now setting) into expected involvements in their back home setting. Bunker and Knowles (1967) are apparently arguing that all too often, insufficient time is allowed or taken for this movement back into the there-and-then orientation. Changes in self orientation are encouraged, occur and are reinforced in the here-and-now. Focus on the back home situation at some point in the experience does facilitate better transfer of that changed orientation to the back home setting but is not necessary to a change in self orientation. A here-and-now focus does seem to be required.

## 2. Trust and collaboration.

The extent to which participants in any training group are prepared to self invest, which involves the commitment of one's self orientation to determined self examination, is partially a function of the atmosphere of trust and collaboration developed in the group. "Thus, if a person experiences low psychological safety, he is likely to defensively distort his weaknesses and be unable to commit himself to new ideas which are different from his present self." (Kolb and Boyatzis, 1970, p. 443). Where the atmosphere in a given group is not perceived as supportive, then the self presentation of participating individuals will be guarded and the value attached to the feedback and impressions shared by others will be low. There will be little possibility



that the experience will be inducement to change one's self orientation toward reality when the participant must adopt a highly defensive stance in response to a general lack of support from others. Rogers (1969) has remarked that "...a striking aspect of any intensive group experience (characterized by trust) is the manner in which group members show a natural and spontaneous capacity for dealing in a helpful facilitative and therapeutic manner with the pain and suffering of others." (Rogers, 1969, p. 30). Trust and therapeutic collaboration seem to enter the group or depart from the group together.

Trust is developed, in stages, as the participants experiment with self expression and experience constructive criticism and support. Campbell and Dunnette (1968) outlined several conditions which they found most often suggested in the literature as conditions which contribute toward the development of the necessary climate of safety. These include a, a T-group which meets for a relatively long time in an isolated environment, b, a heterogeneous group which will probably not meet again, c, continual reinforcement by the staff for supportive behavior, and d, an attitude that the T-group is something of a game without negative back home consequences.

The value of a high level of trust and the establishment of mutually therapeutic relationships was assessed by Clark and Culbert (1965) who closely observed a T-group of nine participants meeting for two, two hour sessions per week for a total of sixteen weeks. They found general evidence to support their hypothesis that "...those members who enter into the most two-person mutually therapeutic relationships show the most improvement in self awareness." (Clark and Culbert, 1965, p. 189). Mutually therapeutic relationships are only established in those groups





in which trust is developed. It is somewhat of a paradox that trust requires collaborative support and collaboration requires trust. Generally trust and collaboration follow an upward or downward spiral where a little trust induces attempts at collaboration which if successful, significantly increase the level of trust. Conversely, failure of collaborative efforts brings about a significant loss of trust in self and others.

### 3. Self disclosure and feedback.

Luft (1963) presented the Johari window to demonstrate the meaning and the value of both self disclosure and feedback to the process of learning about self.

FIGURE II. The Johari Window

	Known to self	Unknown to self
Known to others	AREA OF FREE ACTIVITY  - public self	BLIND AREA
Unknown to others	HIDDEN AREA  - secrets	AREA OF UNKNOWN ACTIVITY  - unexplored potential

In order to enlarge the area of free activity which is associated with a realistic understanding and awareness of self, the individual must either show more of his hidden self to others for criticism and praise; or obtain more information about the activities which fall within his blind area; or experience both an increase in self disclosure and an increase



in feedback from others.

(a) Self disclosure

In order to effect a learning about one's self, the participant must be prepared to (or develop the ability to) self invest and risk disclosure of self. Such self disclosure involves the sharing of feelings and the exercise of behaviors appropriate to the individual's needs - activities both of which could potentially result in criticism, confrontation or praise. Hampden-Turner (1966) presented an existential theory of learning as it occurs in T-groups, based on the posit that the learner accrues a knowledge of self by experiencing the reaction of a significant other person.

"Each learner, with his particular cognitive map, sense of identity and level of self esteem, takes the risk of investing some of his experienced (self-perceived) competence in relation to the 'Other'; the response by that 'other' will move toward synergy or conflict; the learner will then modify his expectations." (Hampden-Turner, 1966, p. 367).

This learning from the exercise of behavior and attending to the behavioral and feeling reactions of significant others is the experiential learning process. "Self-knowledge becomes therapeutically active only when it is experientially owned, and generates the emotional shock which is inherent in the process of self-confrontation. Only such experience has the power to lead to change, choice, and commitment." (Weiss, 1962, p. 473). The individual must be both open to and recognizant of returned information about himself as others respond to him and express their feeling reactions. Self disclosure and investment therefore relates, both to the process of responding in a manner congruent with one's own needs, and the process of being open to information about behavioral inconsistencies. When the individual is sufficiently open to acknowledge





inconsistencies, then the likelihood of his developing the motivating felt state of inconsistency, suggested as essential by Rokeach (1968), will be increased.

If the participant encounters conflict in the form of criticism and confrontation, then his own perception of his competence or self attributes is challenged and he is induced to assess the reality of his own perception. When the participant attaches meaning to the criticism voiced by the significant other, the learner will experience a dissonance between the perception he has had of himself and the way he would like to be. According to Winters, Griffith and Kolb (1968), "...self directed change effort is motivated by an individual's desire to reduce dissonance which he has created for himself..." (Winters *et al.*, 1968, p. 35). The dissonance may occur in response to a recognition of either an over evaluation of self or an under evaluation of self. The dissonance serves as a motivating force toward a realistic orientation toward self. If the participant experiences positive reaction to the behavior he has invested, then such behavior and the concomittant self evaluation are reinforced. Staats and Staats (1964) reference a study by Nuthman in which significant results were obtained showing that positive reinforcement for the emission of self acceptance statements increased the frequency of their emission. Self concept change can thus be effected by the experiencing of realistic successes or realistic failures.

#### (b) Feedback

The reality of the consequence of an individual's behavior is both the individual's subjective experience and the totality of the reactions experienced by others in his environment. A realistic self



orientation is established when the individual has an awareness of the reactions of others, as well as his own reactions. The label, feedback, refers to the process of communication, both verbal and non verbal, of one's true reactions to the behavior of a specific other. It is not to be confused with a communicated demand or injunction for change. Winters *et al.* (1968) report having found that change in self orientation was related to the amount of feedback each individual received from other group members. Kinch (1968) in comparing four treatment factors employing varying degrees of feedback and change in the importance of others providing the feedback, found significant support for his hypothesis that the frequency of feedback and the importance of the person providing that feedback both relate positively to changes in self orientation. He also found that the more dispersed or inconsistent the feedback from other group members, the greater the change. French, Sherwood and Bradford (1966) in their assessment of the relationship between the amount of feedback an individual received in a laboratory setting and reported changes in self orientation, concluded that some support was found for their hypothesis that change in self identity is influenced by the degree to which others communicate their perception of a given individual. Although they suggest that their study was considerably limited by the small number of subjects and the lack of understanding of the influence of their experimental manipulations, notice must be taken of the study. The fact that they found that greatest changes occurred during the second week of the laboratory may relate to the increased frequency of the feedback and the increased significance of the other group members.

The more information each individual has about himself as seen by others, the greater is his opportunity to develop a realistic self orientation. Feedback serves a mirror function. Like the congenitally





blind, who never see their own body movement or the movement of others with which to make a comparison, the person who does not receive accurate feedback maintains some distortion. The quality of the mirror varies with the significance of the 'other' to the individual receiving the feedback. The messages from the mirror vary, as in the hall of curved mirrors, according to the self orientations of the person providing feedback. If the individual has a wide range of reactions related back to him, then he has the information from which to choose personally relevant data.

Kolb and Boyatzis (1970), in examining the dynamics of the helping relationship found that "...the feedback that is received from effective helpers tends to be more positive and less related to control issues than feedback from ineffective helpers. In addition, receivers of help get more non verbal and not-owned feedback from effective helpers." (Kolb and Boyatzis, 1970, p. 288). They argue that while "...there are others who feel that negative feedback is sometimes helpful in that it serves to 'unfreeze' the client's self satisfied concept of himself, and to increase his motivation to change, most learning theorists have concluded that in the long run, reward is more effective than punishment." (Kolb and Boyatzis, 1970, p. 274). Not all feedback induces change. Projections which are not personally relevant, destructive criticisms, and praise which the recipient construes as unrealistic, likely will be inadequate information. The individual will choose, as relevant, those pieces of information which are incremental to his present self orientation. The process of change will involve the slow accumulation of new elements of self understanding. Negative feedback may serve to induce the individual to move to a state of felt inconsistency. Positive feedback may lead the individual to recognize previously unaccepted and/or unrecognized aspects of self.



In summary, feedback is a crucial element in the training group.

"Given the unstructured group as the vehicle and the behavior emitted in the group as the principal topic of conversation, the success of the venture depends upon the crucial process of feedback." (Campbell and Dunnett, 1968, p. 76).

(c) Self disclosure and feedback

According to Miles (1965), "...we have found valid experimental-control differences as a result of human relations training experience: the gains by participants were primarily predicted by variables connected with actual participation in the treatment-unfreezing, active involvement, and reception of feedback." (Miles, 1965, p. 241-2). Similarly, Rubin (1967) stated that "the success of sensitivity training as an educational strategy rests upon an individual's ability to see and understand the dominant norms of self exposure, openness, and feedback which develop in the T-group." (Rubin, 1967, p. 46). Self disclosure and feedback must occur contiguously for learning to take place. The individual exposes more of himself to which others are able to react.

Using the model of the Johari window, the individual increases the size of the area of free activity by disclosing self and receiving feedback. In addition, as the hidden and blind areas of the self decrease, the individual is able to develop the security with self that allows him to experiment with new behaviors. This interactive process between self disclosure and feedback may move the individual's self understanding into the area of unexplored potential. Tillich (1962) refers in German, to this process as *Entschlossenheit*, which "...points to the symbol of unlocking what anxiety, subjection to conformity, and self seclusion have locked (Tillich, 1962, p. 666). This letting go, or freeing up, opens to self awareness aspects of the self which





previously were distorted, denied or simply not recognized by self or others. Thus, through disclosing one's self and obtaining feedback reflecting the reactions and perceptions experienced by others in response to that disclosure, the individual is able to develop a self orientation based upon the reality of his own needs, wants and capacities and the real consequences of his behavior in his environment. The individual moves from a self orientation based upon unchecked assumptions both about the reactions of others and about his own capacities, to a reality based concept of self.

#### 4. Modelling.

Trust, support, a constructive change orientation, the desire to give and receive feedback, and a commitment to change all depend to some extent upon the existing need and skill levels of participating members of the T-group. Not all members can be expected to have the appropriate orientation at the beginning of each training group. In this sense, many of the crucial learning factors depend to some extent upon the process of modelling - participants vicariously learning new behaviors as a result of observing the behavior of the group leader or of some other influential group member. By behaviorally demonstrating the positive value of self disclosure and constructive feedback, the behavior of the trainer can serve as inducement to the participants to model such activities.

Considerable investigation into the process of vicarious learning from the behavior of models has been conducted by Bandura, Ross and Ross (1963).

"New social responses may be acquired or the characteristics of existing response heirarchies may be considerably modified



as a function of observing the behavior of others and its response consequences without the observer's performing any overt responses himself or receiving any direct reinforcement during the acquisition period." (Bandura *et al.*, 1963b, p. 601).

Through the observation of others, individuals are able to acquire new behavioral responses or alter or change existing patterns of behavior.

"In the first place, the observer may acquire new responses that did not previously exist in his repertory. Secondly, observation...may weaken inhibitory responses;...the elicited...responses already exist in the subjects repertory." (Bandura and Walters, 1963, p. 372). This acquisition of new behaviors and the release of inhibited behaviors may occur without any overt or direct reinforcement to the observer. The rate of learning by the observer seems to be significantly influenced by the response-consequences to the model (Bandura *et al.*, 1963b). If the model is rewarded or if he does not receive any direct punishments for his behavior, the observer will be prone to reproduce the model's behavior in similar situations.

The significance of a model seems to be dependent upon the degree of emotional arousal which his involvement creates in the observer. According to study results obtained by Bandura and Walters (1963) "...the influence of models may be most potent when the observers are emotionally aroused and cannot rationally attribute their feelings to stimuli other than the model's behavior." (Bandura and Walters, 1963, p. 377). Where the observer is highly aroused, he has a greater propensity to relate his own excitement to the observed behavior displayed by the model and generalize the stimuli and behavior connection to similar arousal situations (Bandura *et al.*, 1963a). The emotionally intense atmosphere of the T-group, resulting from the focus





upon learning about self, leads to the high level of arousal which so significantly influences the process of modeling.

The leader, by reason of his taking the facilitator role, accepts responsibility for ensuring that each participant has some support for the way in which he identifies himself, and thus models the related support-giving behavior. Positive responses to this support may be vicariously reinforcing for other group members. The significance of the leader's demonstration of supportive behavior was illustrated by Dickenson and Truax (1966) who examined group counseling effects upon college underachievers.

"When the counselled group was divided into those receiving high levels of accurate empathy, nonpossessive warmth and therapist genuineness from their counsellor and those receiving only moderate levels of these therapeutic conditions, the findings indicated that positive changes occur almost exclusively with those counselled students who received the highest levels of therapeutic conditions." (Dickenson and Truax, 1966, p. 246)

The leader, by indicating his understanding of others and his concern for them, models behaviors appropriate to the development of an atmosphere of trust and collaboration. The leader may also model confronting behavior as he reacts to incongruities in the behavior of others. Self disclosure and the giving of feedback may be significantly influenced by the openness-closedness of the trainer as model. Group members, as in the study conducted by Peters (1966), have also been found to identify with the trainer. In this study, they perceived themselves, after the experience, significantly similar to the way the trainer viewed himself.

In addition, other group participants, by interacting in the group situation according to their own unique styles, represent models of new behavioral alternatives which might be meaningful to other group members.



Use of such new behavior may obtain, for the observer, positive feedback which serves as reinforcement for that behavior and an inducement for a positive change in self valuation. For example, persons demonstrating the effect that their favorable self valuations have upon others, illustrate to the self deprecating individual the impact upon others that might be made by realistically valuing favorable aspects of self. Gergon and Wishnov (1965) obtained results demonstrating the effects of high self valuing and low self valuing models upon the self reports of others. The results indicated that, where subjects were paired with a high self valuing model, the expressed level of self esteem increased significantly. Conversely, when the pairing involved a humble other, the subjects emphasized their own shortcomings.

The process of modelling represents a significant learning factor identifiable in T-groups with certain benefits and limitations. The T-group leader, as a person with a realistic orientation toward self and a corresponding high level of self valuation, serves as a model of such for the participants. The basic limitation of modelling lies in its close relationship to conformity. Schein and Bennis (1967) have hypothesized that "...the greater the degree of identification orientation of the trainer, the less the likelihood that things learned will be personally relevant and therefore personally refrozen..." (Schein and Bennis, 1967, p. 317). Conformity to non-personally relevant behavior displayed by the trainer or significant others in the group situation represents another unrealistic facade and fails to contribute to the development of a realistic self orientation. It is extremely difficult for anyone but the individual himself to determine whether the behavior employed is 'self' reinforcing or 'other' reinforcing. That is, only





the individual himself can define behavior as his own for the benefit of himself or as imitatively his own for the satisfaction of others.

The problem of distinction is further complicated by the lack of authenticity the individual experiences when he first tries out new behavior which he is modeling. Greater familiarity leads to ownership and an acceptance of that behavior as part of self. The individual who utilizes new behavior in order to conform also tends, over time, to accept that behavior as part of self. Once the behavior is well established, it is very difficult to determine its personal relevance. The problem lies in the emptiness associated with conformity - the individual who owns personally relevant behavior does not experience the emptiness and loss of self meaning which the conforming individual experiences.

In summary, modelling is a significant and crucial learning factor in the T-group. The behaviors of the T-group leader and of other group members does introduce new, personally relevant, alternatives to participating members and does serve to reduce inhibitions of previously learned but self controlled behaviors. The behaviors exhibited by others are modelled when the observer is vicariously reinforced by perceived or imagined positive consequences for the model's behavior. When the acquired behavior is not personally relevant but acquired in order to obtain some reward, aside from the satisfactions of the behavior itself, the individual is considered to be conforming. As conformist behavior is only a facade, conformity is construed as dysfunctional to the self. Conformist behavior appears to be situational and may not be translated



to out of group experiences. If so, it will likely be extinguished early. Personally relevant behavior changes and concomittant changes in self orientation will not be as readily extinguished in the back home setting.

#### 5. Necessary conditions.

The presence of these crucial learning factors is dependent upon certain necessary conditions. Cartwright (1957) has suggested that the group will be an effective change instrument only when the following conditions are met:

- a, all participants must have a strong sense of belonging to the group;
- b, the group must be highly attractive to its membership;
- c, the attempts to change values, attitudes and behaviors must be relevant to the attraction of the group;
- d, each of the members of the group must be seen as credible, influential and significant to the group;
- and e, efforts to change individuals must not significantly deviate from group norms.

It can be readily seen that the extent to which each of these conditions is met will depend upon the mix of participants in each T-group situation.

#### C. Goals and Objectives

Campbell and Dunette (1968), in reviewing the literature concerning T-group training, compiled a list of general objectives considered to be common to all groups:

- a, increased self insight or self awareness;





- b, increased sensitivity to the behavior of others;
- c, increased awareness and understanding of group process;
- d, improved diagnostic skills in social, interpersonal  
and intergroup situations;
- e, increased action skills;
- and f, learning how to learn.

Miles (1960) suggested that many outcomes usually attributed to individual counseling and psychotherapy are more or less explicitly dealt with in the T-group experience. Such outcomes include added self-insight; increased interpersonal skills, and an improved ability to enter into mutually therapeutic relationships; and, increasingly accurate perception of others. Schein and Bennis (1965) outline several meta goals which represent "...the unspoken, but enormously influential goals and outcomes of laboratory training." (Schein and Bennis, 1965, p. 31). These include, firstly, the development of a spirit of inquiry into self and interpersonal interaction; secondly, an expanded awareness of choice and of alternatives available to choice; thirdly, an increased authenticity simply expressed as a feeling of being freer to be oneself; fourthly, an ability to act in a collaborative way with others; and finally, increased skills in conflict resolution.

It can be concluded that self orientation is a significant focal point of learning in the T-group experience and that change in the ways in which each participant sees himself is a high priority objective of each T-group. The additional objectives concerning acquisition of improved perceptual and interpersonal skills can be considered as supportive of the basic objectives of changed self orientation. As the individual alters his perception of his environment and enters into more intimate relationships,



he can expect to learn more about himself and see himself differently.

#### D. Stages of Development

Delbecq (1970) has summarized chronologically the stages of development which he has continuously observed to occur in T-group experiences:

- "a, Initially, there is a purposeful lack of (traditional) directive leadership, formal agenda, power and status which provides a behavioral vacuum which members fill by enormously rich projections of traditional behavior.
- b, Feedback, based on the 'here-and-now' behavior of members in the anxiety laden, nondirective situation begins as a means of providing valid confirmation (or disconfirmation) of instrumental role effectiveness and/or personality impact.
- c, The development of interpersonal relationships where members serve as resources one to another, facilitating experimentation with new personal and interpersonal behavior; particularly collaborative behavior.

and finally

- d, The exploration of the relevance of the experience in terms of 'back home' situations and problems to enhance transferability of learning beyond the laboratory."
- (Delbecq, 1970, p. 33)

This list generally corresponds to the chronological list of stages of group development outlined by Rogers (1969). Stage one is characterized by an initial confusion and milling around; stage two primarily involves a focus of frustration upon the leaders nondirection; stage three appears as an ambivalence and resistance to openness; and stage four is characterized by a there-and-then exploration of feelings. With the first orientation toward here-and-now feelings, the group enters stage five which Rogers considers to be a stage in which participants test the trust atmosphere. When trust is achieved, the group moves into stage six with increased self disclosure and into stage seven with explicit





FIGURE III. A Chronological Conceptualization of T-group Maturation\*

Stages of Development	Intellectual Dimension	Emotional Dimension	Communication Model	Interaction of Intellectual and Emotional Dimension	Representative Behavior
Infant	1. What is this? 2. Little cognitive understanding	1. Safety, security, self-concept preservation. 2. Response to own viscera. 3. Response to emotions from others.	1. Receiving communication. 2. Output is only social noise.	1. Conflicting.	1. Dependency.
Child	1. Make sense of environment, order it, develop some beginning understanding.	1. Extension of safety and security needs.	1. Some response to communication from others. 2. Minimum of listening.	1. Partially supporting.	1. Attempts to organize. 2. Exploring. 3. Function as individuals.
Adolescent	1. What can I get out of this?	1. Need for acceptance and belonging. 2. Expression of peaks and valleys of emotion.	1. Understands communication but often disagrees.	1. Conflicting.	1. Rejection of authority. 2. Dependency and counter-dependency. 3. Blaming.
Young Adult	1. What can I learn from this? 2. It is possible to learn from peers. 3. Understand goals and objectives of training.	1. Awareness of own feelings and emotions of others. 2. Acceptance of inadequacies. 3. Recognition for what I really am.	1. Sharing.	1. Basically congruent.	1. Sharing information. 2. Leveling. 3. Openness.
Adult	1. Desire to find out more about self and others. 2. Discuss emotions from intellectual viewpoint. 3. What can I give to this?	1. High value on authenticity. 2. Acceptance of others, concern for feelings, desires for warmth, closeness. 3. Desire for growth.	1. Sharing as equals.	1. Congruent.	1. Self-direction. 2. Wider participation. 3. Useful structure. 4. Leadership shared. 5. Both negative and positive expressions are acceptable.

\* Zenger, 1970.



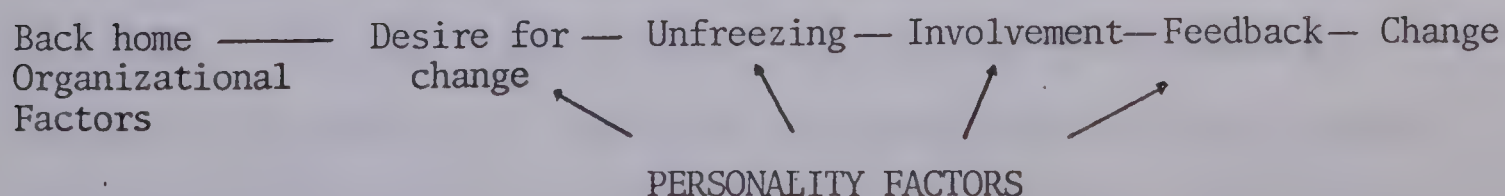
expression of here-and-now reactions to each other and increased impatience with defences. As the final sessions are reached, the group moves into the last stage involving a debriefing of the group experience as a preparation for reentry into the regular backhome situation.

Zenger (1970) has drawn an interesting parallel between the developmental process in the T-group situation and the cycle of human psychological development. Just as each individual develops through various stages of growth beginning with a basic disorientation of self in his environment, and moving progressively to a search for structure, a concern for survival, collaboration and finally to self direction, so does the typical T-group. The adult stage of the T-group is characterized by equality based collaboration, a shared willingness to explore self, a high value on authenticity, and behavior congruent with the needs of all participants (see Figure III).

#### E. Learning Models Describing the T-group Experience

Several writers have described learning models which they suggest explain the learning experience common to the T-group process. Miles (1960) presented a model based upon the processes of unfreezing, involvement and refreezing.

FIGURE IV. Mile's T-group Model (Miles, 1960, p. 303)







Harrison (1971) explained this model as follows:

"According to this model, the T-group laboratory has an initial 'unfreezing' effect. The individual is 'shaken up' by dissonance and disconfirmation of his self concept through the feedback which he receives from others. The unfreezing process creates, in a greater or lesser degree, a need for change. This is followed by a period of search and experimentation during which the individual tries out new conceptualizations, experiments with new behavior, and attempts to gather information about the effectiveness of alternative ways of relating to others. This second phase covers the period during which behavioral changes actually take place. It is followed by refreezing of behavior due both to internal forces stemming from improved adaptation and/or defense and external forces generated by the social environment." (Harrison, 1971, p. 75)

The model is sufficiently adequate as an explanation of the transitional phases each individual passes through during the life of the training group. A basic shortcoming of the model is found in the analogy to freezing - an analogy suggesting rigidity and some permanency involving a very distinctive change in psychological climate before new and additional changes will take place. The model also leaves out the aspects of the interpersonal relationship inherent in the group.

Hampden-Turner (1966) presented an existential learning model which he felt could justifiably be applied to the training group process (see Figure V). Unlike Miles, Hampden-Turner has acknowledged the self-perpetuating cyclical nature of the self orientation process and has stressed the significance of the involvements of the 'other' members of the group. Kolb and Boyatzis (1970) more deliberately describe the significance of the place of the 'Other' in the learning process (see Figure VI). The needs, motivations and self perceptions of both the Helper and the Helpee will significantly influence the learning process. Specifically, motivations relating to the need for control, affiliation, and achievement will influence the direction of the learning experience.



FIGURE V.

## Hampden-Turner Existential Learning Model

(Hampden-Turner, 1966, p. 369)

According to

- a, the quality of his cognition
- b, the clarity of his identity
- c, the extent of his self esteem

j. the investor will attempt to integrate the feedback from this exchange into a mental map whose breadth and complexity are a measure of the investing success.

i, according to the enhancement (or deduction) experienced by the 'other', the latter will reinvest (or avoid) in a manner which moves toward synergy (or conflict).

h, and seek self confirmation through the impact of his invested competence upon the other.

d, all of which he orders into a purposeful synthesis of his experienced and anticipated competence.

e, the subject invests with a degree of autonomy in his human environment.

f, by periodically 'letting go' and risking a portion of his experienced competence.

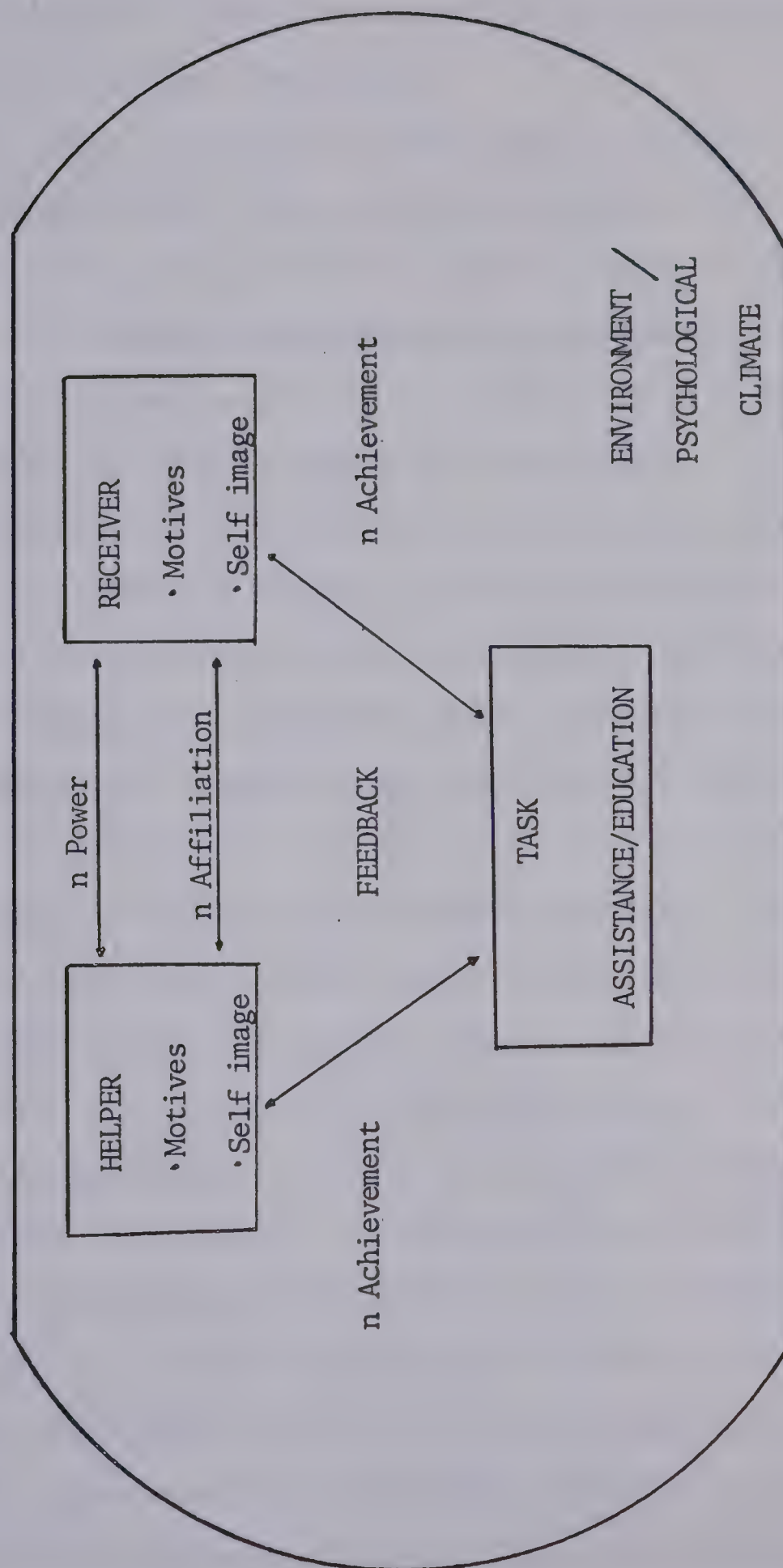
g, he will thus try to bridge the gap between himself and the Other.







FIGURE VI. A Model of the Helping Relationship\*



\* Kolb and Boyatzis, 1970, p. 270.



The task perceived by the two persons to the helping relationship will also be influential. Behaviors will differ if the task is one of problem solution and not one of reeducation.

In an effort to pull the elements described by Miles (1960), Harrison (1971), Hampden-Turner (1966) and Kolb and Boyatzis (1970) together with the significant learning elements examined in the initial portion of this chapter, the following conceptualization is presented as an explanatory model of the T-group process and its relationship to change in the self orientation of group participants (see Figure VII).

It is important to conceive of the T-group as a system of therapeutic relationships of various degrees of significance to learning. Unlike the individual-counseling relationship in which learning takes place exclusively through involvement in a two person relationship; in the T-group experience, learning occurs as a result of both direct and indirect involvement with many others. The two person direct-involvement relationship is only part of the learning situation. The participating individual also obtains new information through vicarious involvement in relationships shared by other group members. He has the opportunity to watch others in action and to see the consequences of their behavior as well as the opportunity to explore the consequences of his own behavior in his direct relationships. In the group setting, each participant is provided the opportunity to learn about self by attending to the reactions of many others. He has the opportunity to selectively use feedback from many other individuals all of different significance to him.

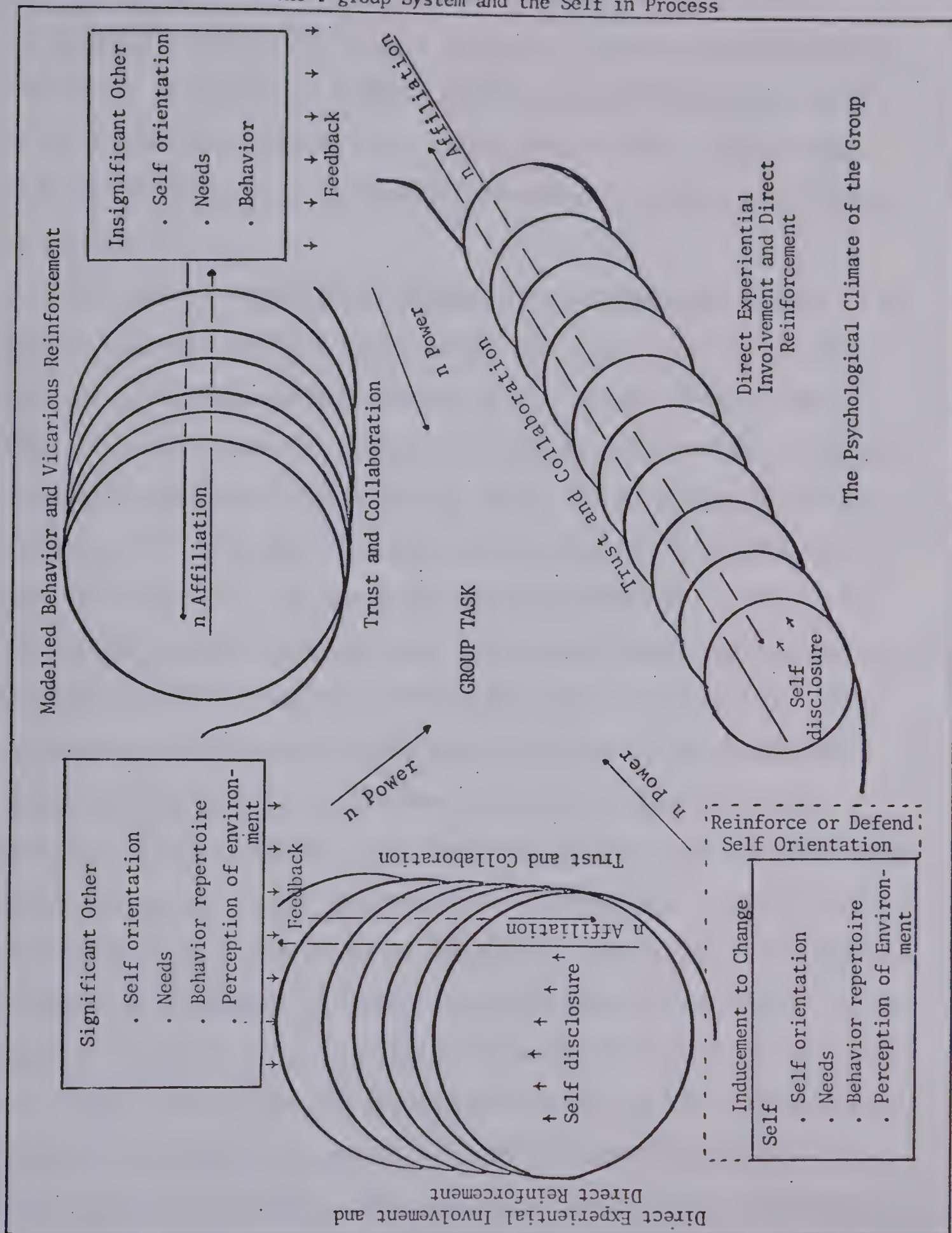
The extent to which each individual develops a willingness to explore his own self orientation will depend upon a number of inter-related factors. His original motivation for entering the T-group experience will influence his initial involvements in the group. He will





FIGURE VII.

The T-group System and the Self in Process





disclose more about himself if and when he recognizes an interested and supportive posture on the part of others. He will disclose himself differently to and accept feedback differentially from different members of the T-group according to their significance to him. He will move to establish mutually therapeutic relationships with those he perceives as significant.

The extent to which these collaborative relationships develop in the T-group will be a function of the amount of early trust the two persons have for each other; their perception of the 'worth' of each other, their respective needs for affiliation, and the general state of the group atmosphere concerning support giving, trust, and motivation to explore changes. The nature that this collaborative relationship takes will in part be a function of the power and control aspirations of each of the two parties to the relationship and their shared perceptions concerning the task with which they are to deal. The relationship of trust and collaboration is reflected in the model by the spiral connecting the 'self' with the 'other'. Trust levels between two people are never constant. Trust is highly situational and dependent upon the perceptions of the two parties to the relationship. However, in the close relationship where there is understanding and appreciation, trust is not easily disturbed by withdrawal of support and expression of resentment. In the relationship where the two parties have a relatively low level of significance and affiliation for each other, the tenuous trust that the two persons establish is subject to rapid decline if support and appreciation are withdrawn. When the other person in the relationship is a trusted significant other, the interconnecting spiral along which trust moves up and down is compressed. Changes in trust will be less





drastic than will occur in the distant relationship where the 'other' is less significant to the 'self'. These close relationships established on a relatively stable level of interpersonal trust will represent the constructive learning environment for change in self orientation.

The degree to which a person accepts as personally relevant the feedback he receives from others, will depend upon the congruence or incongruence of that feedback with his existing self orientation. Learning will be incremental rather than heuristic. If the new information diverges only slightly from his present self concept and has meaning for him, it will likely be accommodated as part of a new self orientation. If the feedback carries information very discrepant with his present self orientation, then the large threat embodied in the implication to change might serve as inducement for him to deny or distort the validity of that feedback. Where the individual encounters a great deal of self discrepant feedback, one of two things might happen. He may set up considerable resistances to the information he is receiving or he might seek out aspects of the feedback which he is able to accept and adopt as part of his self orientation. In either case, a wholesale change in self orientation is most unlikely.

In summary, the T-group experience is a learning system in which participating individuals establish various two person relationships with different trust levels, acts of collaboration, levels of disclosure and feedback, and different task accomplishments. Influential variables include the interaction of each individual's self orientation, needs, behavior repertoire, and perceptions. Pressures within the group such as group trust, agreement on goals and methodologies for reaching those goals, and supportive behaviors serve to maintain membership alliance to



the group. Pressures from outside of the group including back home situations and outsider interference serve to diminish membership attraction to the T-group. The energies of the T-group system are influenced both by pressures within and pressures from without. The specific nature of the T-group at any one point in time is dependent upon the total systemic relationship and the relationship of the T-group system to its environment.





## CHAPTER FOUR

## RELATED RESEARCH LITERATURE ON GROUP OUTCOME

Considerable research efforts have already been devoted to the assessment of the effectiveness of the T-group as a change agent influencing participant self concepts. A variety of populations, designs, measurement instruments, and group experiences, all referred to by the generic term of 'T-group', have been utilized in the studies reported. The following chapter comprises a review of related studies evaluating the effect of 'T-group' experiences upon self orientation. These studies differ widely in degree of experimental sophistication and contribute variously to the body of knowledge surrounding 'T-group' theory. For this reason, this review has been organized according to the empirical value of the reported studies.

## A. True Experimental Designs

The experimenter has a true experimental design when he has control over "...the scheduling of experimental stimuli (the *when* and *to whom* of exposure and the ability to randomize exposures)..." (Campbell and Stanley, 1970, p. 34). Implicit in this definition of a true experimental design is the requirement for random assignment to treatment variables, and comparisons against control groups. When the design incorporates randomization, controlled scheduling of the treatment variables, and controlled comparisons, the experimenter is able to control for the various sources of internal invalidity outlined by



Campbell and Stanley (1970). These include the effects of the following:

1. history - those events, including the treatment, which occur between the pre and post treatment measurements.
2. maturation of subjects - changes occurring within the subjects as a result of the progression of time.
3. testing - the effect of the first test upon responses on the post test.
4. instrument decay - changes in the nature of the observation instrument from pre to post treatment tests.
5. statistical regression - high and low scorers moving toward the mean.
6. selection procedures - differential selection of treatment and control samples.
7. differential loss of respondents - the effect of the differential withdrawal of subjects from the treatment and control samples.
8. the interaction between selection and maturation - the effect of differential growth over time for differentially selected samples.

In the true experimental design the experimenter is able to determine from his results if, in fact, the experimental treatment(s) did make a significant difference in that particular experiment.

The experimenter is also interested in the generalizability of his results to other populations, situations, and measurement variables. To make his study results more generalizable he must add sophistication to his basic experimental design through the use of several control and treatment groups with differential instrumentation procedures, random





selection from general populations, and increased differentiation between treatment variables.

To date, the studies reported in the literature concerning the effect of 'T-group' experiences upon participant self orientations have generally lacked sufficient sophistication to allow wide generalization of study results. No researcher has been able to randomly select from the general population a sample population to be randomly assigned to control and experimental groups. Limited numbers of participants have restricted the use of many control and treatment groups and prohibited fine experimental differentiation between treatment variables. Given the nature of the 'T-group' experience, it has even been difficult for experimenters to employ a true experimental design just controlling for the sources of internal invalidity. Six studies which did employ true experimental designs were reported by Cabianca (1968), Dickensen and Truax (1966), Imbler (1968), Lipscomb (1968), Hess (1970), and Warren (1968).

Cabianca (1968) examined the effectiveness of a weeklong residential training experience, involving unstructured T-group meetings and skill exercises in human relations, by comparing responses of 14 laboratory participants on the Tennessee Self Concept scale with the responses on the scale by a sample of 14 control subjects attending regular classes. The treatment sample had been randomly designated as the treatment group. He administered the scale three times for both the control and experimental samples: the first testing immediately preceded the treatment period, the second followed the treatment period by six weeks, and the last test administration took place 3 months following the first post test. Cabianca employed the t-test for correlated data to determine



the significance of differences between the pre test mean and the post 1 mean, and between the pre test mean and the post 2 mean. He also used an analysis of variance to test the differences between the experimental and control samples on the pre, post 1 and post 2 tests. The analysis of the results indicated that the experimental group showed significant changes on the Total Positive Self score and on five of the eight subscore variables from pre test to post 1 test; whereas the control group only changed on one of nine variables. Both groups showed significant changes from pre test to post test 2 on the Total Positive Self scores and the experimental group changed on 5 out of 8 subscales as compared to the control sample which changed on 3 out of 8. The results of the analysis of variance indicated no significant differences between the control and experimental samples on any of the self concept variables. It would appear that in this experiment, the T-group treatment did not alter the self concepts of the participants any more significantly than regular classroom attendance.

Dickenson and Truax (1966) randomly assigned 42 college underachievers who volunteered for group counseling, to two samples; a control sample of 24 persons and an experimental sample of 24 persons randomly assigned to three treatment groups. The treatment groups, each composed of eight participants and one trainer, met twice a week in one hour sessions for 12 weeks. Using the basic assumption that achievement relates to negative self value and free floating anxiety, Dickenson and Truax compared grade point averages pre treatment and three months post treatment. Their hypotheses that there would be greater improvement for the treatment groups than for the control population was generally supported. They did find that there was a more definite correlation between the





therapeutic conditions provided by the trainer and improvement, than between treatment generally and improvement. In their experiment, group counseling was found to be effective where the trainer or group leader was able to provide a high level of accurate empathy, non-possessive warmth, and genuineness and ineffective where the leader did not provide these conditions.

Imbler (1968) conducted his research on a form of T-group training which he referred to as 'Participation-training'. He describes this as a small group discussion technique designed to train members to work together effectively as a learning team. His population included adult male labor union members participating in a 12 week resident labor program and a randomly selected control sample of individuals who had applied for the program but had not been admitted. He evaluated the before-after scores on the Rokeach Dogmatism Scale, the Taylor Manifest Anxiety scale and a Pencil-Paper form of the Butler-Haigh Q sort as completed by three samples: a randomly selected experimental group receiving 14 two hour sessions in Participation-training, in addition to their regularly scheduled labor classes; a randomly selected control sample attending their regular labor classes; and, the control sample not receiving any treatment. Using analysis of covariance, Fisher's t-test for correlation measures and Pearsons' Product Moment correlation method, Imbler found no significant difference in closemindedness, anxiety or self concept among the three samples following the treatment period.

Lipscomb (1968) selected 66 girls from the lowest social classes using the Hollingshead Two Factor Index of Social position and randomly divided them into three separate samples. She then randomly assigned these three separate samples to three experimental conditions: a, a no



treatment condition, b, a group receiving group counselling with treatments once a week involving 30 minutes to one hour for a total of 13 sessions, and c, an individual counselling condition. She administered the Bills Index of Adjustment and Values before, after and five months subsequent to the treatment period. She employed a t-test and analysis of covariance as methods of analysis. Although there was a significant change in mean scores on Column I (Self description) from pre to post for the group receiving group counselling and from pre to final on Column II (Feelings about self), generally there was no statistically significant differences between the no treatment control sample and the two treatment condition groups. In this study, group counselling did not prove to be a significantly influential treatment.

Like Lipscomb (1968), Hess (1970) compared the outcome of a group counselling treatment with the post treatment period outcome of an individual counselling treatment and several control conditions involving no counselling treatments. Hess randomly assigned 55 identified potential school dropouts to five study groups. Treatment conditions were then randomly assigned to these study groups as follows: group A - group counselling, group B - individual counselling, group C - group tutoring, group D - independent tutoring and group E - no treatment. Six months after the first measurement using the California Test of Personality, the CTP was again readministered to assess changes in self adjustment scores. Like Lipscomb, Hess failed to find a significant difference between treatment effects. No significant differences were found in 10 comparisons of change in self adjustment scores.

Warren (1968) randomly divided 42 readmitted college students into two groups: an experimental group receiving a 10 week, group centered





counselling experience and a control sample not receiving any formal counselling. To measure the congruence between perceived self and ideal self, a 78 item Q sort was developed from anonymous statements submitted both by the readmitted college students and students who had not previously left college. The statements covered the self in relation to three dimensions - academic values, interpersonal relations and emotional development. The Q sort was administered to both control and experimental samples before and after the treatment period. Analysis of the pre and post counselling Q sort assessments yielded a significant change in the expected direction toward more congruence between the perceived and ideal self sorts for the experimental sample, whereas for the control sample no significant changes were found.

Like the study conducted by Dickenson and Truax (1966), this study reported by Warren lends credence to the basic postulate that participants in a 'T-group' experience providing certain therapeutic conditions will experience some change in orientation toward self. The generalizability of these two studies is limited firstly by their use of only college student populations, and secondly, by their examination only of persons volunteering for the 'T-group' experience. The study by Warren (1968) is also limited in generalizability by the failure of the researcher to examine the interaction effect between testing and treatment.

#### B. Quasi-experimental Designs

Most of the studies reported in the literature only approximate experimental designs. The experimenter has not had full control over the scheduling of treatment variables and often has been unable to randomly assign participants to treatment or non-treatment samples. Such



studies do contribute to the body of knowledge relating to T-group theory as long as the limitations are adequately detailed and maintained in perspective. The quasi-experimental design does not involve control of the *when* and *to whom* exposures of the treatment variables are made. Rather, the experimenter only has access to a previously structured semi-experimental situation. The basic criterion which separates the quasi-experimental design from a pre-experimental design is the incorporation of a control group in the study. Quasi-experimental designs were employed in the studies reported by Berzon and Solomon (1966), Caplan (1957), Catron (1966), Gassner, Gold and Snadowsky (1964), Lewis (1968), Mann (1968), Miles (1965), Padgett (1968), Rubin (1967), and Solomon, Berzon and Davis (1970).

Berzon and Solomon (1966) developed a structured program to guide leaderless groups intent upon therapeutic changes. Although the authors failed to detail the nature of their study, particularly neglecting to indicate which instrument they used, the nature and size of the sample population and the nature of their control groups, they do indicate that they examined and compared self concept changes for participants in three samples: 1, a treatment group led by a professional therapist, 2, a treatment group using their self direction program and 3, a control sample of subjects who did not have a group experience. They reported significant changes in the self concepts in the direction of a more positive self evaluation by both the professionally directed and the self directed subjects and no significant changes for the control subjects who did not undergo a group experience. One can only assume that the authors controlled for history by administering their pre-post measurements at the same time for all three groups. The influence of





selection procedures is an unknown quantity, given their reporting style for this experiment.

Solomon, Berzon and Davis (1970) reported a similar study employing an improved self direction program for therapy groups. Using a semantic differential, interviews, a 'Who knows you' inventory, and a self disclosure index, they compared an experimental group of 24 vocational rehabilitation clients involved in a 9 day self improvement workshop with a control sample of vocational rehab clients participating in a normal sheltered workshop program. The experimental group used the personal growth program for self directed groups developed by the authors. No improvement in self understanding was reflected in the data collected from the control group. Analysis of the results for the self directed treatment group indicated that positive changes did occur in self disclosure, self acceptance and self motivation for the participants. The authors appear to be guilty of writing up their study as an advertisement for their program. They fail to indicate how the data was analyzed and how significant the differences were.

Caplan (1957) attempted to assess the effect of group counselling experiences upon the self concepts maintained by Junior High School boys. He matched three control samples against three experimental groups of 6, 6, and 5 persons respectively. He administered a Q-sort based upon forced distribution containing 50 self referent items describing various aspects of the 'self in school' before and after the treatment period. The treatment group met for 10 weekly sessions each of a duration approximating 50 minutes. The group counselling treatment was also supplemented by voluntary individual counselling. To check for selection bias, Caplan examined the pre-test self/ideal correlations



for the control and experimental samples. He concluded that insignificant correlations indicated that the groups had been drawn from a random population. His analysis of the responses obtained before and after indicated that "...a significant change took place within each experimental sub group (and within the total experimental group) and... no such significant change took place within any of the control sub groups (nor within the whole control group)." (Caplan, 1957, p. 126). The measured changes for the experimental group were also found to be significantly greater than that of the control sample. Generalizability of the results of this study is somewhat limited by the small size of the sub samples, the lack of random assignment, and the failure of the researcher to test for test-treatment interaction.

In his examination of the effect of educational-vocational group counselling upon the perception of self and others, Catron (1966) obtained results reflecting significant treatment effect. Catron used a modified Butler-Haigh Q sort of 70 items reflecting good and poor levels of self adjustment. He found that both his experimental and control samples changed significantly from pre to post test, however the change for the experimental group was highly significant ( $p < .01$ ) and the change for the control sample only reached significance at the .05 level. He found that the Self Adjustment score for the experimental group began lower and ended higher than the control sample Self Adjustment scores. The results are highly questionable due to the researcher's failure to incorporate in his analysis the responses, both before and after the treatment period, of a large number of persons who did not complete the treatment. The original experimental sample shrank from an N of 78 persons to an N of 54. The control group shrank from 71 persons to





66 persons and was further decreased by experimental manipulation to an N of 46 persons matched to the experimental group according to sex, grade, age and performance on the School and College Ability test. The thirty percent drop out rate represents a significant amount of information concerning the impact of the treatment upon the experimental sample. For those who persisted, greater changes were experienced than those experienced by the control sample. The question as to what happened to the drop outs in terms of self adjustment remains unanswered.

Gassner, Gold and Snadowsky (1964) reported two experiments looking at changes in the phenomenal field of self structure observed after human relations training. In the first experiment, the experimental group was comprised of 46 persons participating in a 3 day Human Relations program. The Bills Index of Adjustment and Values was administered one day prior to and two days after the treatment period to both the experimental group and a control sample of 21 persons who had applied for future programs. Analysis of the results using the Wilcoxin matched pairs signed ranks test indicated that there was a significant increase in congruence between the self perceptions and the ideal self perceptions in both the experimental and control samples. It was found that the post treatment scores for the experimental group did not differ significantly from the post test scores of the control sample. In the second experiment, the researchers administered a modified form of the semantic differential used by Burke and Bennis (1961) to 45 participants in a similar 3 day human relations program and to a control sample of 27 persons enrolled in psychology courses offered by the same institution. They found no significant increases in similarity between the self concept and the ideal self concept for either the experimental group or



the control sample. In addition, they found no significant difference between the changes experienced by the two samples. Both of these studies demonstrate the importance of the comparison of treatment effect against a control population. The first study, primarily a more sophisticated replication of the study by Grater (1959), demonstrates how inaccurate it would be to conclude that the treatment represents a significantly beneficial learning environment for change of participant self concept when the control population underwent similar degrees of movement without the benefit of the treatment.

Lewis (1968), in his study of the effect of long group therapy sessions on participant perceptions of self and others, compared the responses of 48 married couples on the Butler-Haigh Q sort for self and ideal self before and after the treatment period. The 48 couples were divided into four samples. The author does not indicate that distribution was made on a random basis. Two experimental groups received 9 continuous hours of group psychotherapy emphasizing effective interpersonal communication. A third experimental group participated in 9 continuous hours of an education-discussion type group session. The fourth sample, the control population, did not meet together during the treatment period. Although no significant results were obtained, Lewis concluded that nine hours of either group treatment type is superior to no group experience. The insignificance of the results obtained reduces the value of such a conclusion as an aid in the process of arriving at a decision whether or not to suggest a similar form of group treatment for similar populations.

Mann (1968) compared two samples of mentally retarded boys, administratively structured as experimental and control populations each





with an N of 18. Both the experimental and control samples were subgrouped into three groups of six people. The experimental sub groups received 12 one hour sessions of group counselling. The control sub groups received 12 one hour sessions of supervision in structured laboratory study. Two self concept scales were administered to all sub groups before and after the treatment period. Analysis of the results demonstrated that results from one of the two scales significantly supported the hypothesis that those receiving group counselling would benefit more in terms of self concept change. In addition, the experimental group received significantly higher teacher ratings on behavior improvements subsequent to the treatment period. No explanation was given as to the procedure involved in the administrative structuring of the experimental and control samples and no indication was given as to the statistical assessment made on the pre treatment similarity of the two groups. As a result, the demonstrated differences subsequent to the treatment period are subject to suspicion. No check for test-treatment interaction was reported.

A large number of criterion measures were made in the study conducted and reported by Miles (1965), some of which were included to assess changes in self orientation. The experimental group was comprised of 34 school principals attending a two week Human Relations Laboratory at Bethel, Maine, in 1958. Miles incorporated two control groups in his study. One control group was composed of matched pairs nominated by the experimental participants. The second control group was a group of 148 school principals randomly selected from the National Directory of School Administrators. Criterion measures included self and other reports on job behaviors, trainer ratings, self



reports on learnings, perceived power on the job, perceived autonomy on the job and self reports on the degree of unfreezing. Although Miles reported observing valid experimental control differences, he found that changes were more apparent in organization and group relevant behavior than in global attributes of the self.

Padgett (1968) utilized one of the largest overall sample sizes in his study of the effect of group counselling on the self concepts of prospective teachers. Overall, 302 student teachers participated in the study. The groups were not determined randomly, as participants in the group treatment were volunteers for the experience. In the study, there were four samples: a, a control group of non volunteers attending regular classes, b, a control group of volunteers for the group counselling program to be offered in the following term, c, an experimental group receiving one to three group counselling sessions and d, an experimental group undergoing four to nine group counselling sessions. Pre and post treatment measurements of self orientation were made with the Tennessee Self Concept scale. Statistical analysis was performed using analysis of variance, Duncan's multiple range test of significance and the Chi square test of independence with the levels of significance set at .05 and .01. Padgett found that the treatment effect of group counselling was statistically significant. Unfortunately, the study failed to control for selection biases as a source of internal invalidity. The results may be partially explained by the orientations of volunteers to the experience and not explicitly by the treatment process.

Although Rubin (1967) was primarily interested in the reduction of prejudice through laboratory training, his study partially involved an investigation into the influences of the experience upon the level of





self acceptance maintained by lab participants. He argues that prejudice relates to the inability of the individual to accept the personal relevance of material contradictory to his 'self percept'. He employed a unique control design wherein the lab participants served as their own control. By making his observations twice prior to the treatment with an extended period (2 weeks) of time between observations, he had a stability measure which he was able to employ as a control. His design is conceptualized below:

$O_{1C}$	$O_{2C}$	X	$O_{3C}$	N = 11
	$O_{1e}$	X	$O_{2e}$	N = 30

where X designates treatment and O indicates the point at which each observation was made. The treatment was a two week residential program for 50 participants, however, 9 individuals failed to properly complete the sentence completions and were not used in the study. Rubin failed to delineate in what way the responses provided were inadmissible. As a result of his analysis, Rubin concluded that the training improved the willingness of individual participants to accept, as personally relevant, self threatening material. The greatest increases were experienced by those individuals who focussed more on personal issues in the lab setting. With this design, the greatest limitation is inherent in the lack of control over history. "The rival hypothesis exists that not the treatment but some more or less simultaneous event produced the shift." (Campbell and Stanley, 1970, p. 39). Given the nature of the population studied, maturation, which had not been controlled for, does not seem to have been a relevant source of invalidity. The effect of instrument decay



is not so easily dismissed. The subjective nature of the analysis of the sentence completions is subject to suspicion. Expectations of preferred outcomes might have influenced the observations made and no mention of controls for such a bias was made by the author.

Positive evidence supporting the basic postulate that 'T-group' training contributes significantly more than no treatment to changes in self orientation was provided by the studies conducted by Berzon and Solomon (1966), Solomon, Berzon and Davis (1970), Caplan (1957), Catron (1966), Mann (1968), Padgett (1968) and Rubin (1967). However, each of these studies had some basic experimental shortcoming which leaves the results somewhat suspect. The failure of the studies reported by Gassner, Gold and Snadowsky (1964), Lewis (1968), and Miles (1965) to obtain evidence leading to rejection of their null hypotheses of no difference between control and treatment groups, also contributes to the suspicion of the results of the previously mentioned quasi-experimental studies.

### C. Pre-experimental Designs

In the pre-experimental design, no comparison is made between an experimental group and a control sample. The experimenter generally has simply made pre and post measures on an experimental sample receiving some treatment. These studies, in that they are exploratory, do contribute to further study and research and are not to be devalued or discouraged where more elaborate designs are not yet possible. Early in the history of T-groups, many studies were completed using either the 'pre-post test, no control' design or a 'treatment-post test' design usually incorporating testimonials and reports from back home contacts. The 'single sample: pre-test, post-test' design was used in the studies





by Burke and Bennis (1961), Field (1970), Gazda and Ohlsen (1961), Grater (1959), Johnston (1970), Koile and Draeger (1969), Lohman, Zenger and Weschler (1959), and Stock and Thelen (1958). Several other studies using the 'pre-test, post-test' measurement design involved attempts to extract information concerning interrelationships of certain treatment variables. However, no control groups were used and they must be described as pre-experimental studies. These studies were reported by Clark and Culbert (1965), French, Sherwood and Bradford (1966), Kelman and Parloff (1957), Kolb and Boyatzis (1970), Truax, Schuldt and Wargo (1968), and Turgeon (1969). Studies using a treatment-testimonial design were reported by Bunker (1965), Bunker and Knowles (1967), Gordon (1950), Himber (1970), and Schutz and Allen (1966).

#### 1. 'The Single Sample:Pre-test, Post-test' design

Burke and Bennis (1961) examined the self concept outcomes of a 3 week residential experience in which 84 participants spent two hours per day in T-groups of 13 to 15 delegates and the remainder of the time in skill exercise groups, sessions on theory, individual and group consultation and counselling, and special clinics organized around particular topics of interest. For this study, the authors created a special group oriented questionnaire based on the semantic differential technique developed by Osgood and Suci (1955), which they administered to the participants once during the middle of the first week and once during the latter part of the third week. From their analysis of the results obtained, Burke and Bennis concluded that "...members of T-groups, during the course of their training experience, become more satisfied with their perception of self, (and) move their actual self percept in the direction of their ideal...." (Burke and Bennis, 1961, p. 179).



Such a definite conclusion from results obtained in a study which has not controlled for various sources of internal invalidity including history, maturation, instrumentation, and testing, appears to be premature. The replicated study by Gassner, Gold and Snadowsky (1964) has cast considerable doubt upon the conclusions reached by Burke and Bennis.

Field (1970) used Keniston's Interpersonal Alienation scale to assess the impact of a T-group experience upon the expressed alienation of workshop participants. As this instrument has a sub scale measuring self contempt, the study appears to be relevant to this review. The scale was administered to 22 graduate students taking a three week human relations training group course involving one, two hour session per work week day. The scale was completed by the participants before, after and six months subsequent to the treatment. The participants were also requested to keep daily logs and diaries which were subjectively analyzed for self reported gains. There was a significant decrease in total alienation scores and seven sub scales, one of which was self contempt, between the pre and post treatment measures. In looking at the scores on the final measurement, it was found that this decrease persisted over time. From the logs kept by the students, Field determined that generally expressed gains included greater feelings of self knowledge, self growth, self worth and self confidence. As this study did not include a control comparison, interpretation of these results is highly limited to a suggestion that further and more sophisticated investigation is required.

Gazda and Ohlsen (1961) divided 16 male and 18 female prospective counselors into four groups meeting twice a week for one hour sessions over a period of seven weeks under the guidance of a skilled trainer.





The investigators examined changes in acceptance of self and others as reflected in changed responses to the Picture Story test, and stability of the self concept as determined by responses on a modified version of Brownfain's Self Rating Inventory. The t-test for the mean difference between correlated data was used to analyze the responses obtained pre and post treatment. The data did not statistically support the hypothesis that there would be significant gains in acceptance of self, and of self and others. The authors suggested that the treatment period might have been too short as several of the participants were just beginning to assimilate their learning experiences when the treatment terminated.

In looking at the changes occurring in participant self attitudes during a Leadership Training group, Grater (1959) studied the change scores in real and ideal self reports for 30 participants meeting in an eleven week class with a non-directive leader. To test his hypothesis that the experience in this group situation would lead to significant changes in the individual's attitudes towards himself, Grater calculated the mean discrepancy score between the ideal self and the actual self, as reported on the Bills Index of Adjustment and Values, for the pre treatment and post treatment tests. The critical ratio of the difference between these two mean scores was then calculated to determine if the difference was significant. This analysis indicated that there was a significant reduction in the discrepancy between real and ideal self between the before and after measurements and that the greatest change occurred in the real self scores. Johnston (1970) similarly used the Bills Index of Adjustment and Values, before, after, and ten months subsequent to a ten day residential laboratory in Human Relations in



which 23 people participated. Like Grater (1959), she found a significant decrease in the discrepancy between real and ideal self on the pre, post and final measures which were statistically significant at the .05 level. Greater changes occurred in the real self than in the ideal self as was observed by Grater. As with the study by Burke and Bennis (1961), considerable doubt concerning the experimental validity of these studies was raised by the study reported by Gassner, Gold and Snadowsky (1964). Without the use of a control group, no check for the effect of testing, maturation, and history can be made and all conclusions concerning the effect of the T-group experience upon participant self orientations should be tentative.

Koile and Draeger (1969), in their investigation of participant ratings of their leader and themselves, used a 30 adjective scale semantic differential to obtain self ratings before and after a four day human relations laboratory. The 44 participants in the lab met for 8 general sessions and for six sessions in T-group. The data was analyzed using an analysis of variance technique for single classifications and repeated measures. The lab participants significantly changed their self ratings on 11 of the 30 adjective scales. Subsequent to the training experience, they rated themselves as more warm, trusting, sensitive, supporting, deep, caring, authentic, relaxed, cosy, natural, and dependent. The authors also noted that the participants were *not* more alike in the ways they saw themselves at the end of the experience than they were prior to the treatment. Lohman, Zenger and Weschler (1959) similarly looked at perceptual changes occurring during sensitivity training, particularly as they related to perception of the group leader and self. In the study, 3 groups of college coeds met for 2 hour sessions twice a





week for 16 weeks with trainers acting as resource persons for the group. The participants completed the Gordon Personal Profile for the way they saw themselves and the way they saw their trainer. Analysis of the results indicated no significant changes in self concept. Using the Butler-Haigh forced distribution Q sort for self percept, Stock and Thelen (1958), in their analysis of the effect of a T-group experience for 29 college students, found that 18 respondents out of 26, who completed both measurements, showed statistically significant changes in their self perception Q sorts pre and post treatment. However, for the member who had the greatest change in scores, the correlation between the pre and post sorts was .38 indicating that participant self precepts remained relatively stable despite the training experience.

The results reported by these eight studies applying the single group:pre-test, post-test design to an investigation of the effect of an experiential training group upon the self orientations of participants, are equivocal. Six of the studies obtained results which tend to be supportive of our basic postulate that such experiences will significantly alter the self orientation reports of participants in the experience. Due to the experimental limitations of these studies, the evidence leading to rejection of the null hypothesis of no change during the T-group experience, should be tentatively interpreted. Without the use of a control group, the effects of testing, history, maturation, selection, and in some cases, instrument decay, are not accounted for. There still remains a rival hypothesis that something other than the treatment contributed to the changes in self orientation reports. As demonstrated by the study of Taylor (1953), self introspection necessitated by repeated self reports on test instruments may be enough



to contribute toward an increased positiveness of attitude toward self. Two of these reviewed studies obtained results which did not contribute to a rejection of the null hypothesis of no change and further cast suspicion upon any rejection of the no change postulate.

## 2. 'Several Treatment Samples:Pre-test, Post-test' designs

Clark and Culbert (1965) reported a study in which they tried to determine the degree of relationship between changes in self orientation and the establishment of relationships mutually perceived as therapeutic. They evaluated the tape recordings from the 2nd and 3rd, and the 30th and 31st sessions of a T-group of nine persons meeting for two, two hour sessions per week for a total of 16 weeks. From their analysis of the tapes, they found a general change in the direction from rigidity to flow in the participant's relations to his feelings and sense of meaning, his way of experiencing, his degree of incongruence, and his presentation of self. Using the Barrett-Lennard Relationship inventory, to determine the extent to which members perceived themselves to be in mutually therapeutic relationships, the researchers tried to assess the relationship between the individual's change scores from tape recording ratings and the extent to which he perceived others as having positive regard, empathy, congruence, and unconditionality of positive regard toward him. Although there was no statistically significant relationship, there was general evidence to support the hypothesis that those members who enter into the most two person mutually therapeutic relationships will show the greatest change in self orientation.

French, Sherwood and Bradford (1966) systematically manipulated the degree of feedback T-group participants received in order to examine the relationship between changes in self identity and the amount of





feedback received. The twenty participants in a two week conference involving human relations training completed a 19 bipolar scale questionnaire, measuring differential dimensions of self identity, a total of four times (pre, interim, post, and 10 months subsequent). Analysis of these responses indicated that significant change in the 19 self identity scores did occur over time with most change occurring during the second week of the conference. As to the relationship of changes in self identity and the degree of feedback an individual received, the researchers concluded that the small number of subjects involved in the study and the possibility of contamination of their controls over feedback, made the study results highly questionable and difficult to interpret.

The relationship of participant anxiety to participant changes in self awareness and self evaluation was investigated by Kelman and Parloff (1957). The therapeutic method studied was an analytically oriented group therapy program of 20 weeks. The level of anxiety was measured with a self satisfaction Q sort, a symptom disability checklist and a discomfort evaluation scale. Self awareness was measured both by a Q sort and prediction of sociometric ratings. These instruments were completed by fifteen neurotic patients at the beginning and again after 20 weeks of group therapy. The change between before and after scores was analyzed and "...it was found that patients whose anxiety decreased in the course of therapy became more aware of their own behavior, whereas those whose anxiety increased became less aware." (Kelman and Parloff, 1957, p. 285).

Kolb and Boyatzis (1970) researched the effect of pre treatment goal setting by participants upon the changes in real-ideal self congruence reflected by completion of a 60 item semantic differential



before and after treatment. One hundred and eleven students participated in the study by completing the differential before and after participation in a 30 hour T-group of 15 students meeting twice weekly for two hours each session. The students also heard a lecture on self directed change and were instructed to choose goals relevant to change of their behavior in groups. On the average, individuals showed a change of .35 on the adjective dimensions which were related to their goal while they showed a change of only .16 on those non-goal related dimensions. This difference was found to be highly significant ( $P < .005$ ). No check for the interaction effects of the lecture on self directed change was made by the researchers.

In the study reported by Truax, Schuldt and Wargo (1968) measures were obtained from 3 different groups undergoing a group psychotherapy experience. The three groups were respectively drawn from a population of hospitalized mental patients, psychoneurotic outpatients, and institutionalized juvenile delinquents. The treatment involved 24 sessions, taken twice weekly over a time span of 3 months. The participants all completed the MMPI, Anxiety Reaction scale, the Butler-Haigh 80 item Q sort and the Minnesota Counselling Inventory before and after the treatment. The authors found that for all three patient populations, therapeutic outcome related to changes in self-ideal congruence occurring during the group therapy experience.

The additional effect of incorporating video self confrontations in the T-group was investigated by Turgeon (1969). He compared pre and post treatment measures using the Butler-Haigh Q sort and process evaluations of self - non-self references from audio taped sessions for two samples; three experimental groups receiving T-group training





supplemented by video tape feedback sessions, and three control groups receiving only T-group training. Intrapersonal correlation between the individual's rating of his real and his ideal self were calculated for before and after measures. The correlations for the experimental sample were compared with the control sample. In both groups, five differences between correlations were significant. For the experimental group, the number of self referent statements increased and the number of non-self referent statements decreased significantly more than for the control group.

In order to draw conclusions from any of these studies concerning the impact of the T-group upon the self orientations of the participants, a no-treatment control group would have been extremely beneficial. The above studies suggest that changes in self orientation do occur during T-group experiences. The validity of the evidence from these studies is attenuated by the lack of control for testing effects, test-treatment interaction, selection, history, and maturation effects. The results received do suggest that changes do not occur for all members in a given group. Some of the variables influencing each individual's change rate might include anxiety, feedback, test-person and treatment-person interaction effects, involvement in mutually therapeutic relationships, and goal orientations.

### 3. Testimonial studies

In the studies reported by Bunker (1965) and Bunker and Knowles (1967), a matched control group was compared with a treatment group of participants in human relations training. In both studies, self reported changes and the behavioral changes observed by co-workers during a 12 month period following the training were collected. The study by



Bunker and Knowles (1967) added a comparison between the responses for participants in labs of different durations. Bunker (1965) reported three treatment outcome clusters in the testimonials and co-worker observations which were not common to those who had not participated in a Human Relations training experience. These included; 1, increased openness, receptivity and tolerance of differences, 2, increased interpersonal skill and 3, improved understanding and diagnostic awareness of self, others, and interactive processes. Bunker and Knowles (1967) observed similar differences between the treatment and control samples and also observed that the longer experiences contributed toward more proactive and interactive behavior changes. The responses provided by co-workers are subject to question. The individual respondent, knowing that the person being rated has had a T-group training experience, might have been biased toward greater attentiveness to certain behaviors.

Similarly, Himber (1970) contacted 643 teenagers several months after they had participated in a sensitivity training session totaling approximately 28 hours of T-group supplemented by 9 hours of nonverbal exercises in general sessions. Respondents were asked to 1, indicate how they had changed either positively or negatively as a result of the experience, 2, answer an open-ended question phrased as "What did you get out of the experience?" and, 3, check the degree in which six statements of potential learning were true for them. Himber encountered a no response rate of 31%. From the responses, it was found that increased self identity and improved ability to express self ranked second and fourth respectively. "There seemed overwhelming confirmation that the youths had achieved more insight into themselves. Self identity





and self acceptance - so essential for this age group to achieve - were constantly mentioned." (Himber, 1970, p. 314).

Gordon (1950) administered a study in which nondirective interviews were conducted with each of a group of sixteen participants in a group development lab. The participants were asked to freely talk about what learnings they thought they had undergone while in the lab. These interviews yielded 247 separate statements classified into eight categories:

	<u>No. of persons</u>	<u>No. of statements</u>
1. change in self	12	50
2. degree of confidence in self to change	12	38
3. emotional impact of experience	9	18
4. new or reinforced understanding of self	14	59
5. degree of confidence in self understandings	5	22
6. increased clarity in goals	3	5
7. attitudes toward back home situation	7	18
8. changes in cognitive understanding	11	37

The statements received suggest that the training experience had a significant impact upon the self orientations of the individual participants. In a similar study, six months after a laboratory in human relations, seventy-one participants completed the Firo-B and an open-ended questionnaire concerning learnings accrued in the laboratory. The results were reported by Schutz and Allen (1966). They found that the participants were effected differentially. Content analysis of the responses to the open-ended questionnaire indicated that the self had



been a primary focal point for the participants. Forty percent (40%) of the respondents reported development of more tolerance, acceptance, and liking for self. An additional seventeen percent (17%) reported intellectual changes involving an increased understanding and awareness of self. Ten percent (10%) thought they had developed a more confident, secure and realistic concept of self. Another ten percent (10%) reported an adverse change in their concept of self, while the remainder reported no change in self concept. Some overt behavioral changes were reported by fifteen percent (15%) of the respondents.

The above studies which have reported testimonial responses of training participants do not really give much to an improved understanding of the real effect of T-group experiences and, at the same time, they are difficult to ignore. Like weather reports, one questions their validity, but is hesitant to ignore them. The highly enthusiastic reports by the participants suggest that there is some validity to the basic postulate that T-group experiences contribute toward changes in self orientation. On the other hand, these responses are subject to considerable bias. The participant who has invested considerable time and money may, in an attempt to reduce his cognitive dissonance surrounding such investment, convince himself that he has changed the way the program advertisements said he would.

#### D. Conclusion.

It must be concluded that the research evidence concerning the impact of the T-group experience upon each participant's self orientation is equivocal. Evidence has been presented leading to both rejection and non-rejection of the null hypothesis that T-group participation would not lead to changes in self orientation; and, where control samples have





been used, that participation in a T-group would not contribute to greater changes than experienced by the no treatment control sample. This is in agreement with the conclusion reached by Campbell and Dunnette (1968) who conducted a rather thorough review of the research literature on group training outcome which had been reported prior to 1968.

#### E. Problems in T-group Research

There has been considerable difficulty experienced by researchers in developing and using a true experimental design. Ideally, the researcher would like to utilize a design incorporating random assignment of participants to treatment and non treatment groups, both a control group and a control sample, a check for test-treatment interaction by setting one treatment and one control group aside for post measurement only, and a sufficient number of treatment groups to allow a partialling out of the various effects of trainer differences, time together, and the respective crucial learning factors. To date, most research concerning the relationship between T-group participation and self orientation change has only approximated true experimentation.

With any design less than a true experimental design, the researcher encounters certain limitations which he needs to specify before interpreting his results.

"The difficulties in studying any treatment process are legion: vagueness in outcomes; imprecisely described processes; absent or non-comparable control groups; measures which sensitize the subjects; small numbers of (usually self-selected) subjects; and failure to specify a clear theoretical basis for predictions made."  
(Miles, 1965, p. 215)

These problems certainly hold for research of the outcomes occurring through T-group participation. One *basic* problem that contributes to the



wide variety of results obtained is the wide range of activities that are referred to generally as T-group training. Group psychotherapy, Human Relations training, sensitivity training, leadership training, group dynamics experiences, personal growth laboratories, and T-group training are all lumped together in the literature (and in this review of the literature) as forms of T-group learning experiences despite the many intrinsic differences.

Another, almost insurmountable, problem facing the researcher investigating T-group outcome is that of voluntarism. By its nature, the experience depends very significantly upon voluntary participation and a self initiated desire to learn about self. It is often very difficult for the researcher to control either the number of subjects in his experiment, their mix, or their assignment to experimental or control samples. Often the experimenter may only have access to a previously structured population of volunteers for a T-group experience and access to some matchable control samples. Selection bias, therefore, remains very difficult to control.

Instrumentation also poses considerable problems for the researcher. The varied results obtained may be attributable to the varied sensitivities of the instruments used. The question still remains as to whether or not the instruments used measure that which the researcher hopes they will measure.

"The available instruments for measuring human relations training processes and outcomes are not more sensitive, accurate, or stable than those currently available for assessing the outcomes of counseling, and most of them are... 'reactive' in nature, so that subject sensitization and/or test-treatment interaction are quite likely." (Miles, 1960, p. 302)

The inadequacies of the instrumentation available for investigation of changes in self orientation are traceable, according to Crowne and





Stephens (1961), to the neglect of several crucial psychometric and methodological principles associated with test construction. These include: firstly, the unsupported assumption of the equivalence of different assessment procedures; secondly, the absence of any clear construct-level definition of the variable to be measured; thirdly, failure to construct tests in accord with the principles of representation sampling; and finally, a lack of control for the social desirability factor in self report tests. Although they were writing primarily about self acceptance and self evaluation, Crowne and Stephens (1961) summed up most clearly the plight faced by the researcher with an interest in phenomenological experience:

"A phenomenological approach to self acceptance is concerned with self acceptance itself or 'real' self acceptance as a totally private, subjective experience of the subject. By definition, this is never observable by any other; the best that an experimenter or clinician can hope to do is make relatively accurate guesses, or inferences, concerning the existence or degree, of the variable as it 'exists' in the subject.

"It is only with some difficulty, it would seem, that a phenomenologist can avoid the necessity of assuming the validity of self reports." (Crowne and Stephens, 1961, p. 118).

Crowne and Stephens (1961) particularly criticized the construct validities of the Bills Index of Adjustment and Values, Gough's Adjective Checklist, the Butler-Haigh Q sort, and the Tylor Manifest Anxiety scales for lack of representativeness and controls for social-desirability factors. There have been many new rating scales and measurement devices introduced since Miles (1960) and Crowne and Stephens (1961) presented their comments upon the poor state of the measurement union. However, in general, the same weaknesses still apply.



#### F. An Injunction for Continued Research on T-group Outcome

Despite these difficulties and the inherent limitations, research is still warranted. The equivocal evidence collected to date serves as adequate incentive to the researcher who wishes to resolve some of the ambiguity. By conducting research incorporating as much experimental sophistication as the situation will warrant, the researcher may obtain evidence that will lead to situational changes and allow an increase in the degree of true experimentation. With this in mind, the following research was conducted despite the many limitations facing this researcher. Although the choice of experimental design was negatively influenced by a paucity of financial resources, subjects, training resources, and physical facilities, this study was considered to be justified. Recognizing that the experimental design used was quasi experimental and that, in a sense, the study incorporated a replication of previously reported study designs, it was still hoped that this investigation might lead to a greater awareness of the validity of the basic postulate that participation in a T-group experience leads to changes in self orientation.





## CHAPTER FIVE

## EXPERIMENTAL DESIGN AND PROCEDURE

## A. Purpose.

This study was conducted in order to test the basic postulate that significant changes in self orientation occur during T-group experiences. Specifically, the study was undertaken in order to test the following:

- a, to determine if participants in a T-group experience demonstrate changes in self orientation by changed responses on pre and post treatment, paper-pencil measures of self orientation,
- b, to determine whether the changes demonstrated by the T-group participants differ significantly from changes demonstrated by a non-treatment sample responding on the same instrument at the same points in time,
- and c, to determine what is the nature of changes in self orientation demonstrated by participants in a specific T-group experience.

## B. An Operational Definition of Self Orientation.

In this study, self orientation was operationally defined as the individual's own perception of himself in terms of his response ability, his typical response or behavior styles, his self evaluation and acceptance, his awareness and understanding of his own nature, and his contact with others, as demonstrated by responses on the Personal



Orientation Inventory (Shostrom, 1968).

### C. Measurement.

It was decided to utilize the Personal Orientation Inventory (the POI) developed by Everett Shostrom (see Appendix A) as the measurement instrument in this study. Although this instrument was not used in any of the previously reviewed studies, it appears most satisfactorily applicable here as an instrument for the assessment of self orientation change. There were several aspects of this instrument which particularly served as inducement to this researcher to use it in this study:

- its apparent ability to measure the aspects of self orientation incorporated in the definition used,
  - the growth orientation of the underlying theoretical framework,
  - the way in which it has been constructed,
  - its relative ease of administration and completion,
  - its suitably high test-retest reliabilities,
- and, - its unexplored potential as a measurement instrument for investigating the influence of T-group participation upon self orientation.

The instrument is discussed in detail below.

#### 1. The instrument

##### a, Construction

The Personal Orientation Inventory is comprised of 150 sets of opposing statements concerning orientation toward self, and man, generally. Of the 150 sets of statements, all but 25 sets are self referent in construction: for example, "I am not afraid of making mistakes." The remaining twenty-five sets are constructed as statements of attitude: for





example, "A person can completely change his essential nature." In addition to their interpretation as statements of attitude, they can be interpreted as projective statements of self orientation.

The individual respondent is asked to indicate which of the two statements in each set is 'mostly true' for him. For example:

"A. I accept my weaknesses.

B. I don't accept my weaknesses."

By stipulating what the opposite of the first statement is, the instrument insures that the opposite statement is standard for all respondents. With other techniques, this insurance is not usually provided.

According to Shostrom and Knapp (1966), the instrument was constructed from self orientation differences perceived by therapists in their practice at the Institute of Therapeutic Psychology. In addition to being based upon the value judgements of clients in therapy, items were also derived "...from the research and theoretical formulations of many writers in humanistic, existential, or gestalt therapy such as Horney, Maslow, Reisman, May, Perls, Ellis, Fromm, Rogers, and Buhler." (Shostrom and Knapp, 1966, p. 193). The instrument was designed to provide the following information.

a, A Time Orientation ratio -

The extent to which the respondent sees himself oriented to the present as opposed to the past and future.

b, A Support ratio -

The extent to which the individual sees himself reacting according to his own needs, feelings and wants as opposed to the needs, feelings and wants of others.

d, Self-actualizing values -

The extent to which the individual subscribes to values



generally held by self actualizing individuals.

d, Existentiality -

The individual's perception of his own flexibility and ability to react according to each situation rather than rigid principles.

e, Feeling reactivity -

The individual's self perceived sensitivity and responsiveness to his own feelings.

f, Spontaneity -

The individual's perception of his own experienced freedom to react for oneself.

g, Self regard -

The individual's perception of his strengths and value.

h, Self acceptance -

The individual's acceptance of his weaknesses and deficiencies.

i, Nature of man -

The individual's concept of the nature of man, masculinity and femininity.

j, Synergy -

The individual's perception of his own ability to 'transcend dichotomies', to recognize in self and others the continuity and inconsistency of attributes; that is, the ability to recognize that each individual is both good and evil, hot and cold, white and black.

k, Acceptance of aggression -

The individual's perception of his own ability to accept his own aggression as natural.

l, Capacity for intimate contact -





The respondent's perception of his own ability to develop intimate contact with others.

It can be seen that the various scales provide information related to the various dimensions of self orientation. The individual's perception of his own response ability or perceived control over self is shown by the major scale referred to by Shostrom as the 'Support ratio' and more specifically by the subscales of 'Self-actualizing values' and 'Existentiality'. The way the individual typically sees himself relating to his own needs and his environment is reflected in the subscales 'Feeling reactivity' and 'Spontaneity'. The 'Time Orientation ratio' also provides an indication as to the individual's perception of his behavior style. Self evaluation and acceptance are demonstrated by responses to the subscales of 'Self regard', 'Self acceptance', and 'Acceptance of aggression'. Awareness and understanding of his own nature are assessed by the subscales 'Nature of man' and 'Synergy'. The individual's perception of himself in contact with or isolation from others is reflected in the subscale 'Capacity for intimate contact'. Each of the subscales gives some indication as to how the individual is oriented toward himself. (Refer to Appendix B for a indication of items comprising each scale).

#### b, Scoring

The two scales, 'Time Orientation' and 'Support' have been scored as ratios. The 'Time orientation' ratio was obtained by dividing the number of past or future orientation responses by the number of present orientation responses. This ratio can be read as the percentage of time that the given individual is oriented toward the past or future. The 'Support' ratio was obtained by dividing the number of responses indicating other direction or external support by the number of responses indicating inner direction or internal motivation and support. Like the



'Time orientation' ratio, the 'Support' ratio can be converted to a percentage score which indicates the percentage of time that the individual is attuned to the needs of his environment as opposed to his own needs. The lower the ratio, the higher the individual's perception of his own response ability. The ratio scores and the subscale scores were tallied for both the pre treatment and the post treatment tests.

The ten subscales are scored by tallying the number of responses which correspond to the respective factor, with each raw score indicating the degree to which the individual perceives himself on that dimension. For example: an individual may indicate that fourteen of the self acceptance statements are mostly true for him. The raw score of fourteen would then be treated as the individual's self acceptance score on that measurement.

In order to look at differences in amount of self orientation change, individual change scores were also obtained for each individual on each subscale. The difference between the pre treatment score and the post treatment score for each individual on each subscale represents the individual's change score for each respective subscale. The group mean score could then be derived from these individual change scores for each subscale. These are not just gain scores as direction was not accounted for; minus signs were dropped and the score obtained was considered to be a reflection of the degree of change experienced by the individual.

### c, Reliability

Shostrom (1968) reports a sufficiently high test-retest reliability for the raw scores of the scales of the Personal Orientation Inventory to allow its use in this study. When the instrument was administered twice, with a one week delay between administrations, to forty-eight undergraduate college students, the following test-retest





reliability coefficients, shown in Table 1, were obtained. Aside from the 'Nature of man' and 'Acceptance of aggression' subscales, the instrument has a general level of reliability favorably comparable with other measures of self orientation and personality.

With regard to the use of change scores, it is recognized that this procedure of scoring is less reliable than the use of raw scores. The error associated with the pre and post treatment raw scores is compounded when the difference between them is taken as a change score: "...other things being equal, the higher the correlation between pre test and post test, the lower the reliability of the difference scores." (Berater, 1963, p. 4). The reliability is found to be reduced in the following proportion when the treatment does not change the variance of the scores:

$$\frac{(\text{Reliability at a single point in time}) - (\text{Test-Retest Reliability})}{1 - (\text{Test-Retest Reliability})}$$

(Lord, 1963, p. 32). For example, if the coefficient for internal consistency is at .90 and the test-retest reliability coefficient is equal to .75, then

$$\frac{.90 - .75}{1 - .75} = \frac{.15}{.25}$$

The reliability of the change scores is then shown to be .6. However, the data from this study was treated in this way in order to specifically investigate the impact of T-group participation upon self orientation change. It is expected that the change experienced by the group members would not be in the same direction. Using raw scores, the changes experienced by individuals in the group tend to cancel each other out when grouped statistically. The use of change scores is subject to suspected distortion due to statistical regression. If the treatment



TABLE I. Test-Retest Reliability Coefficients for the POI<sup>†</sup>

Scale	Abbreviation	Reliability Coefficient
Time orientation	TO ratio	.71
Support	Support	.84
Self-actualizing values	SAV	.74
Existentiality	Ex	.85
Feeling reactivity	Fr	.69
Spontaneity	Spon	.81
Self regard	Sr	.75
Self acceptance	Sa	.80
Nature of man	Nm	.66
Synergy	Sy	.72
Acceptance of Aggression	Aa	.55
Capacity for intimate contact	Cic	.75

<sup>†</sup> Shostrom, 1968, p. 32.





as has been hypothesized, has no effect on self orientation change, then this distortion should be equal for the two groups and the analysis of variance technique will show no difference. The use of change scores, according to Berieter (1963), is most legitimate for the measurement of changes in personality and attitude characteristics where people start out at widely differing points and change in different directions and amounts. Given the test-retest reliability coefficients shown for the POI, the reliability of the change scores with the compounded error effect of the two measures partialled out, should be sufficiently high to meet the needs of this examination of change scores.

#### d, Validity

Shostrom (1968) has interpreted the responses to this instrument to be measures of self actualization when, in fact, the instrument discriminates between the self orientations of persons clinically diagnosed as displaying self actualizing behavior and those diagnosed as displaying non-self actualizing behavior. In one instance, the instrument was administered to two samples of 29 and 34 persons who were clinically determined to be self actualizing and non-self actualizing adults respectively. The instrument significantly discriminated between the two samples. Subsequent studies looking at the responses of alcoholics, teachers, hospitalized psychiatric patients and college students, similarly supported the discriminative validity of the instrument (Shostrom, 1968).

The construct validity was also determined by comparison with other measures purporting to measure the same things. In a study reported by Shostrom and Knapp (1966), the POI scales were found to be highly correlated with the MMPI Social Introversion-Extroversion scale when



responses from a 'beginning therapy' sample were compared with an 'advanced therapy' group. This suggests that the POI is measuring self perception of interpersonal behavior. In the same study, a high negative correlation was found between the MMPI Depression scale, suggesting that the POI is measuring self regard and self perception of response ability. Knapp (1965) reported a study in which responses by 94 subjects to the POI were compared to their responses on the Eysenck Personality Inventory. The following correlations, as shown in Table II, were reported in the study.

TABLE II. Correlations Between the POI and the Eysenck Personality Inventory<sup>†</sup>

POI scale	Correlations with the EPI	
	Neuroticism	Extraversion
Time orientation	-.57**	.11
Inner direction	-.35**	.33**
Self actualization values	-.27**	.18
Existentiality	-.11	.30**
Feeling reactivity	-.08	.30**
Spontaneity	-.34**	.39**
Self regard	-.52**	.36**
Self acceptance	-.17	.10
Nature of man	-.21*	-.05
Synergy	-.25*	.06
Acceptance of aggression	-.09	.37**
Capacity for intimate contact	-.24*	.26**

\*  $p \leq .05$       \*\*  $p \leq .01$

<sup>†</sup> Knapp, 1965, p. 169.





It can be seen that all subscales but self acceptance were correlated with either the neuroticism scales or the extraversion scales of the Eysenck Personality Inventory.

From these studies, it appears that the instrument does discriminate between the self orientations of various people. It has been found to correspond with measurements from other instruments purporting to measure self perceptions and judgements and to correlate with clinical behavior diagnoses for different populations.

#### D. Experimental Design and Procedure.

##### 1. Design

In order for this investigation of the basic population (concerning change in self orientation occurring during a T-group experience) to be of any meaning, some comparison with everyday experience is necessary. If the T-group is to be considered of value as a learning experience, it must be shown that any changes in self orientation which do occur during a T-group experience differ in some way from changes which occur during each individual's normal daily interactions. To test for significant differences between the changes in self orientation experienced by participants in a T-group experience and the changes in self orientation experienced by persons not receiving the T-group treatment, a two sample comparison design was utilized. Using O to designate a point of observation and X to designate the treatment period, the design used in this study is conceptualized below. As can be seen, it resembles Design #10 outlined by Campbell and Stanley (1970).

$$\begin{array}{ccccc} & O_{e1} & & X & & O_{e2} \\ - & \frac{\quad}{O_{c1}} & - & - & - & \frac{\quad}{O_{c2}} - \end{array}$$



The broken line indicates that the participants were *not* randomly assigned to the separate samples and the treatment was *not* randomly assigned to one of the two groups. Assignment to the respective samples was not within the control of the experimenter as participation in the T-group experience was voluntary.

## 2. Nature of the Samples

The two groups studied were administratively structured according to the expressed interests of the participating subjects. In this study, the two groups were comprised of graduate students in Educational Psychology who were taking part in the 1971 summer session program offered by the Department of Educational Psychology at the University of Alberta. The treatment group was comprised of fourteen graduate students who had specifically applied for participation in the credit course entitled 'Interpersonal Relations in Education'. The course was explicitly described as a class involving direct experience in small unstructured groups. The control sample included fourteen graduate students who were participating in a six week summer session credit course in Developmental Psychology. The control sample was obtained when the course instructor, in response to the experimenter's request, asked for volunteers from his class of twenty students who would be willing to participate in a study being conducted by a fellow graduate student. It was explained that they would be required to complete a paper-pencil test instrument twice with an interval of one week between administrations. Class time was made available for their completion of the instrument during both observation periods. The control sample was arbitrarily selected by the experimenter as an available and comparable population of graduate students. However, it must be kept in mind that these students





had not made any overt expression of an interest in participation in a T-group experience. Voluntarism, as it relates to motivation to explore self, remained an uncontrolled influence.

The mean age for the experimental group was 30.23 years with the group composed of 6 women and 8 men. The mean age for the control group was 35.72 with the group composed of 5 women and 9 men. The primary occupation in both groups was that of teaching. The groups appeared to be equally distributed in terms of marital status.

### 3. Nature of the treatments

The treatment group met for one week in a semi-residential setting for approximately 40 hours of T-group time. The course description read as follows: 'Note: this laboratory emphasizes direct experience in small groups for the purpose of studying the behavior (including ideas and feelings) of self and others in interpersonal situations.' Basic encounter, communication, and gestalt techniques were utilized by the trainer-facilitator to foster self exploration and exploration of interpersonal relationships arising in T-group experiences. Confrontation of self and feelings, and of issues between self and others was encouraged. The Gestalt rules and games outlined by Levitsky and Perls (1970) were introduced as the trainer considered them appropriate to the ongoing interaction of the group. Open and direct feedback was encouraged by the trainer. The group quickly moved to and stayed with a here-and-now orientation in the T-group setting. Experimentation with new behavior was brought about through the use of facilitating exercises and activities such as the break-in exercise, one-on-one confrontation of issues, alter ego sessions, and sessions focussing upon the awareness continuum. The trainer-facilitator for the treatment group was a member of the staff of the



Department of Educational Psychology. He has had considerable experience in the training of T-groups for students, business administrators, teachers, adolescent groups, and married couples. In an interview subsequent to the weeklong T-group experience, he expressed agreement that this T-group experience corresponded to the conceptualization and definition of a T-group experience presented in Chapter Three of this study report.

The control group, during the treatment period, met for three regularly scheduled 2 hour class sessions. These class sessions involved lecture presentations and group discussion of Developmental Psychology. The control group had been meeting for three weeks prior to the treatment period and was to meet for two additional weeks subsequent to the treatment period. Each week involved 2 hours of regular class time per day, Monday through Friday. Class material during the three weeks preceding the first observation did touch upon humanistic theories of human development. To this extent the students had been focussing some of their attention upon theory related to self orientation. However, there was no expressed linkage between class material and the POI instrument.

#### 4. Test administration schedule

The pre treatment test was administered to both groups on the first day of the treatment period. The post treatment test was administered to the treatment group at the beginning of the second last session on the last day of the treatment period. The post treatment test was administered to the control group during their regularly scheduled class time on the last day of the treatment period. Despite arguments, raised primarily by Harrison (1971), against test administration during the first and last sessions due to the effects of first session anxieties





and last session departure glow, it was deemed advisable to do this to assure collection of responses from all participants and to minimize interference in the unstructured T-group experience. As many of the T-group participants were from out of town locations, it was not entirely feasible to have the test instruments completed in advance. A mail survey was ruled out by the need to have responses from all participants, and mail surveys do not usually obtain 100% response. In lieu of advanced testing, Harrison (1971) has advised that testing be done on the second day of the laboratory experience and again several days after or one day before the last day of T-grouping. In view of the short duration of this T-group experience and the previously mentioned shortcoming attributable to mail surveys, this recommended testing schedule was considered to be inadequate for this study.

### 5. Limitations of this study

This study has a series of limitations. Due to the lack of random assignment of subjects to groups and experimental conditions, the experimenter has not been able to control for selection effects. Similarly, as four of the twenty original class members in the control population elected not to participate in the study and two members of the control group who responded on the pre treatment period test elected not to complete the post treatment period test, a differential mortality effect has been introduced. The interactive effect of the testing with the treatment cannot be determined with this design. It is not possible to determine if the test increased the sensitivity of the respondents to the effect of the treatment. The interaction effect between selection procedures and the treatment cannot be ascertained. As the treatment group was comprised of volunteers who wished to participate in a self



exploratory experience, this interaction effect is suspected to be high.

With the experimental design used, the experimenter has been able to control for the effects of history, testing, instrument decay, and statistical regression. The use of a control group and contiguous testing serves as a check for these sources of invalidity. The generalizability of the results of this study is thus limited to the very narrow situation which matches these experimental conditions. This study does not rule out the possibility that there are other rival hypotheses which account for the outcomes which the results reflect. Such hypotheses include the effect of selection bias, disproportionate mortality rates, test treatment interaction, and selection treatment interaction. The effect of maturation and the interaction effect of selection and maturation may not have been controlled for as there is a difference of 5.49 years between the mean ages for the two groups. In this researcher's point of view, the difference in maturation rates of the two groups over the one week period is not likely to have been significant.





## CHAPTER SIX

## HYPOTHESES, ANALYSIS AND RESULTS

## A. Hypotheses.

As stated before, the basic postulate to be tested is that significant changes in self orientation will be experienced by participants in a T-group laboratory. Implicit in this basic postulate is the assumption that persons not participating in the experience will not undergo the same degree of changes. Specifically, then, the hypotheses which are tested in this study read as follows:

HO<sub>1</sub>: There is no significant difference between the control and treatment populations as shown by pre treatment responses on the POI. The control and treatment samples were drawn from the same general population.

HO<sub>2</sub>: There will be no significant treatment effect upon self orientation as shown by the group mean scores on the two major ratio scales and the 10 subscales of the POI.

HO<sub>3</sub>: There will be no significant treatment effect upon self orientation change as shown by the group mean change scores for each of the 10 subscales and a total change score.

The hypotheses to be tested are non-directional. This is in agreement with the theoretical frameworks of Laing (1967), Perls (1969a) and Dabrowski (1964) which summarized, state that positive or growth producing changes can occur in any direction. This fits with this researcher's personal



experience in groups, the previously mentioned results reported by Carkhuff and Truax (1966), and the perceptions shared by Harrison (1971). Changes do not occur in the same direction for all participants. As expressed negatively by Harrison (1971), "...it is common for both overtalkative and underparticipative (domineering and very dependent, cold and distant) members to be pressured by the rest of the group to approach the group average..." (Harrison, 1971, p. 78). Jewell (1967) found, in his study, that the pre treatment self concept level was the most accurate predictor of the direction of self concept change. The observed effect may merely be the effect of statistical regression toward the mean; however, such a relationship holds with the nature of the treatment. Each individual tends to undergo an intensive focus on only one or two central issues related to his self orientation. It may be that changes which do take place relate highly to polar changes on those personal issues which differ from individual to individual. A test on Hypothesis Two will indicate whether or not there has been a significant treatment effect on the group mean. The test for Hypothesis Three will indicate whether or not the changes experienced by the treatment sample exceeded in degree the changes experienced by the control sample. Should the results obtained fail to refute the null hypothesis of no significant treatment effect on group mean scores, this third test for a significant treatment effect on change should determine whether or not the expectation that the treatment effect is nondirectional was valid.

## B. Analysis.

### 1. Analysis of covariance

In order to test null Hypotheses One and Two, an analysis of





covariance technique was utilized. According to Winer (1962), the technique may be used to partial out the effects of undesirable pre treatment differences which exist between the control and treatment groups in quasi-experiments of the Campbell and Stanley (1970) type 10.

"There are two general methods for controlling variability due to experimental error - direct and statistical. Direct control includes such methods as grouping the experimental units into homogeneous strata or blocks, increasing the uniformity of the conditions under which the experiment is run, and increasing the accuracy of the measurements. Statistical control is achieved by measuring one or more concomitant variates in addition to the variate of primary interest. The latter variate will be termed the criterion, or simply the variate; the concomitant variates will be called covariates. Measurements on the covariates are made for the purpose of adjusting the measurement on the variate. The latter objective is one that is particularly important in situations where the experimenter cannot assign the individual units at random to the experimental conditions." (Winer, 1962, p. 578)

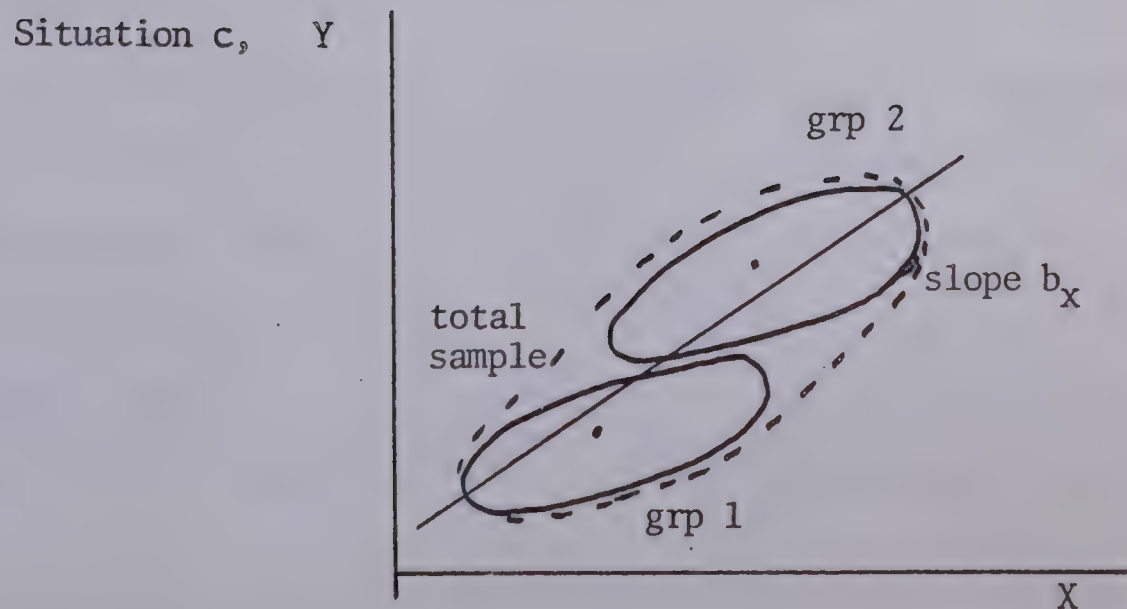
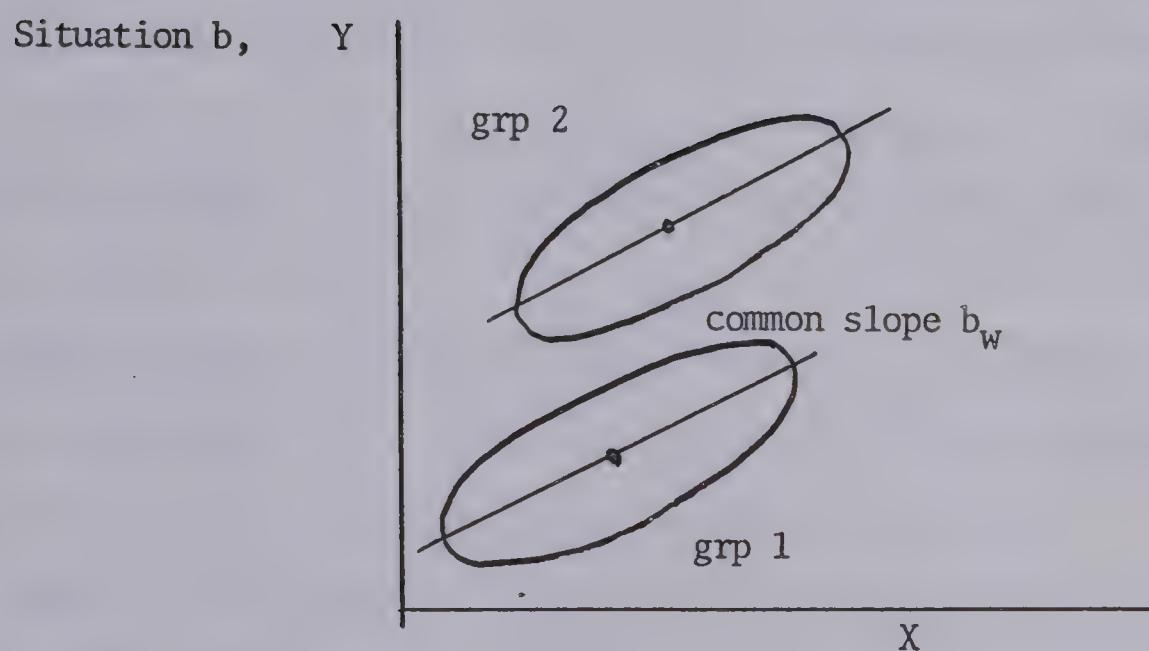
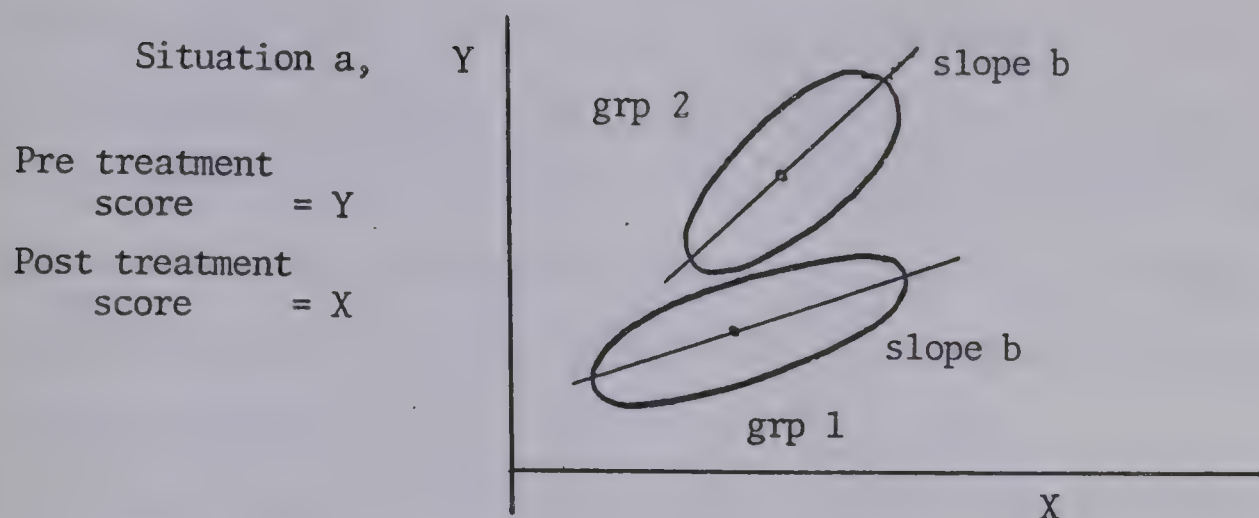
Where the experimenter is faced with conducting his research using previously structured groups and he is not certain of the similarities and differences between groups, the analysis of covariance technique allows him to; firstly, test to determine if the two groups come from the same general population; and secondly, to test for treatment effect by adjusting for slight differences on the covariate. The analysis of covariance technique therefore involves two tests: a test for homogeneity of regression and a test for treatment effect on group means.

The analysis of covariance technique utilizes a comparison of regression lines. A regression line is that line which best demonstrates the relationship between two variables. There are several different regression lines which are possible for the two groups in this study. These are illustrated in Figure VIII. The three different situations represent three different conditions:

- a, separate regression lines for the two groups
- b, regression lines passing through the respective



FIGURE VIII. Three Regression Line Situations







group centroids with a common slope and c, a single regression line fitted for the total population.

The operation of the analysis of covariance technique involves testing to determine which one of the three situations depicted is most likely true for the population tested. "From an information theory point of view, the question is whether a significant loss of information occurs in considering the regression lines to be parallel [or fitted to one common regression line]." (Flathman, 1968, p. 22).

Hypothesis One will be tested by comparing situation (b) against situation (a). In this test for homogeneity of regression, the object is to determine if the common slope for the two groups fits sufficiently well that there is not a significant loss of information. If the two separate regression lines are not significantly different, then the common slope will in fact be a more accurate prediction line as it will have been developed using all available information. In this instance the data would not refute the null hypothesis and we would conclude that the two samples come from the same general population.

Hypothesis Two would be tested by comparing situation (c) against situation (b). This test is essentially a test for the significance of the difference of the means adjusted for the difference in the covariate. If, in this test, situation (c) proves to be the most appropriate, then it can be concluded that the data provides no evidence of a significant treatment effect upon the post treatment scores adjusted as if the pre treatment scores had been equal. If situation (b) is shown to be most appropriate, then the null hypothesis of no treatment effect would be rejected. This situation would only be most appropriate if the treatment



group did show a significantly different post treatment mean with scores adjusted for initial differences between groups.

## 2. Assumptions and limitations of the analysis of covariance technique

There are certain underlying assumptions incorporated in the use of the analysis of covariance technique. It is assumed that the differential effects of the treatment on individual group members cancel each other out so that the test measures a common treatment effect. The distribution of population scores on the instrument is assumed to be normal. The experimental error which measures all uncontrolled effects which are not related to the treatments is assumed to be normally and independently distributed. It is assumed that the treatment effects and regression effects are additive such that regressions are homogeneous. Another underlying assumption is that the regression of the criterion on the covariate is linear.

If these assumptions are not met, then the technique should not be applied. The initial assumptions concerning normal distribution of scores in the population, and normal and independent distribution of error effects seem valid for this experiment. The assumption of homogeneity of regression is explicitly tested as a test for Hypothesis One. If regression is not homogeneous, then no further tests should be undertaken. According to Winer (1962) the F tests in the analysis of covariance are robust with respect to the violation of the two assumptions of normality and homogeneity, as shown by evidence from the usual analysis of variance procedure. The assumption of linearity is crucial to the technique. "If the true regression is curvilinear, our estimates of the adjusted criterion means can be very much in error.





This problem is particularly serious in quasi-experiments where group differences in the covariate can be very large...[and] substantial extrapolation of the regression lines for each group will be involved." (Maguire, 1968, p. 7). It remains to the researcher, with his knowledge of the variables involved, to decide whether this assumption is valid. In view of the comments presented by Carkhuff and Truax (1966) and Harrison (1971), this assumption may be erroneously applied to assessments of self orientation change occurring in T-groups. It may be that the relationship is curvilinear. To date, no hard core evidence has been presented to suggest that the relationship is not linear. Recognizing this, the assumption of linearity was applied to the data obtained in this study.

### 3. Analysis of variance

To test the third hypothesis, that there will be no treatment effect upon the mean change scores for the two groups, an analysis of variance technique has been used. The treatment effect is the difference between the mean for each experimental group and the grand mean of the population tested. This difference measures the degree to which a given mean for the treatment group differs from the respective mean of the control group. To support the null hypothesis of equal means and equal treatment effect, the summation of the differences should not be significantly different from zero. Using the F-distribution as a standard of assessment, the null hypothesis would only be rejected if the observed F ratio exceeded the critical F value at  $K-1$ ,  $kn-k$  degrees of freedom where  $k$  represents the number of groups and  $n$  represents the number of subjects (Winer, 1962).



#### 4. Assumptions and limitations of the analysis of variance procedure .

The population scores are considered to be normally distributed. It is assumed that the treatment did not alter the variance of the scores such that the variances of the scores for the two groups remain homogenous. That is "...one of the basic assumptions...is that the variance due to experimental error within each of the treatment populations be homogeneous." (Winer, 1962, p. 92). Each measurement is assumed to be the sum of three components; a component which is constant for all treatments and all subjects; a component which is constant for all subjects within a given treatment condition; and an experimental error component which is constant for all subjects within a treatment condition but may differ for different treatment conditions. That is, the experimental error is assumed to be normally and independently distributed for each treatment population.

According to Winer (1962), "The magnitude of type 1 error is not seriously affected if the distributions depart moderately from equality; i.e., the test is robust with respect to the assumptions of normality of distribution and homogeneity of error variance." (Winer, 1962, p. 62). There is nothing about the populations tested to suggest that the distribution of scores would not be normal or that there would be any real differences between the variances of the scores. As the technique is relatively robust, it appears that the collected data will sufficiently meet the assumptions of the underlying model.

#### C. Results.

##### 1. Results for Hypothesis One:





$H_{01}$ : There is no significant difference between the control and treatment populations as shown by pre treatment responses on the POI. The control and treatment samples were drawn from the same general population.

Stated simply, the hypotheses can be phrased as

$H_0$ : Regression slope(treatment group) = Regression slope(control group)

which can be simply written in the form,  $H_0: b_1 = b_2$ .

Table III lists the pre treatment means and variances for the two groups on each of the scales.

TABLE III. Pre Treatment Means and Variances

Scale	Means		Variances	
	Treatment Group	Control Group	Treatment Group	Control Group
T.O. ratio	.338	.258	.074	.036
Support	.462	.389	.030	.014
SAV	20.50	21.36	6.681	5.846
Ex	21.64	22.57	14.115	14.110
Fr	15.64	17.21	7.648	6.093
Spon	12.36	14.07	7.033	3.786
Sr	11.57	11.93	5.148	4.995
Sa	16.29	16.50	11.346	9.346
Nm	12.00	12.57	4.879	2.093
Sy	7.43	7.36	2.379	1.187
Aa	16.21	17.64	10.462	5.017
Cic	18.71	20.50	12.995	6.072



The summary tables for the tests for homogeneity of regression for the two major scales, Time Orientation ratio and Support ratio, and the ten subscales are shown in Table IV. From this table, it can be seen that only the observed F ratio for the 'Self Acceptance' subscale exceeds the critical F value at the .05 level of significance. None of the F ratios exceed the critical F value for the .01 level of significance. As the following test for treatment effect is relatively robust, the .01 level was set as the decision criterion. Therefore, the analysis fails to refute the null hypothesis ( $H_0: b_1 = b_2$ ) justifying the conclusion that the regression weights for the two groups on each of the scales come from the same general population. The two groups can be considered to be from the same general population in terms of their responses on the Personal Orientation Inventory. Further tests for treatment effect can legitimately be applied to the data obtained from the two groups. The responses on the Self Acceptance scale, although significantly different at the .05 level, will be treated as responses from sample groups drawn from the same general population. This seems appropriate given that the observed F ratio only just exceeded the critical F value, and that the subsequent tests for treatment effect are sufficiently robust to allow slight discrepancies from homogeneity.

## 2. Results for Hypothesis Two:

$H_{02}$ : There will be no significant treatment effect upon self orientation as shown by the group mean scores on the 2 major ratio scales and the 10 subscales of the POI.

This hypothesis can be rephrased as

$H_0$ : Adjusted mean(treatment group) = Adjusted mean(control group)





TABLE IV. Tests for Homogeneity of Regression

Scale	Source	SS	Df	MS	Fobs.
Time Orientation	Regression	.02	1	.02	.50
	Error	1.04	24	.04	
Support	Regression	.04	1	.04	2.22
	Error	.43	24	.018	
Self Actualizing Values	Regression	14.99	1	14.99	3.23
	Error	111.41	24	4.64	
Existentiality	Regression	8.60	1	8.60	1.46
	Error	141.11	24	5.88	
Feeling Reactivity	Regression	1.26	1	1.26	.39
	Error	77.94	24	3.25	
Spontaneity	Regression	3.49	1	3.49	.82
	Error	102.36	24	4.27	
Self Regard	Regression	9.34	1	9.34	2.93
	Error	76.61	24	3.19	
Self Acceptance	Regression	28.47	1	28.47	4.41*
	Error	155.13	24	6.46	
Nature of Man	Regression	3.19	1	3.19	1.08
	Error	71.08	24	2.96	
Synergy	Regression	.03	1	.03	.02
	Error	29.29	24	1.22	
Acceptance of Aggression	Regression	1.80	1	1.80	.33
	Error	129.30	24	5.39	
Capacity for Intimate Contact	Regression	3.65	1	3.65	.56
	Error	157.37	24	6.56	

Critical F ratio at .05  $F'_{24} = 4.26$  at .01  $F'_{24} = 7.82$

\* Significant at .05 level.

\*\* Significant at .01 level.



which can be simply written in the form -  $H_0: \mu'_1 = \mu'_2$ . Table V lists the post treatment means and the same means adjusted for differences on the covariate.

TABLE V. Means and Adjusted Means for Scale Scores

Scale	Post-treatment Means		Adjusted Means	
	Treatment Group	Control Group	Treatment Group	Control Group
T.O.	.244	.242	.224	.262
Support	.307	.309	.293	.323
SAV	21.29	22.00	21.49	21.79
Ex	25.50	24.43	25.83	24.10
Fr	17.57	17.64	18.05	17.17
Spon	13.57	14.64	13.92	14.29
Sr	12.93	12.93	13.02	12.84
Sa	18.50	18.50	18.55	18.44
Nm	12.57	13.36	12.69	13.24
Sy	7.93	7.57	7.90	7.60
Aa	18.00	17.64	18.34	17.30
Cic	20.93	21.07	21.40	20.60

The summary tables for the analysis of covariance tests for treatment effect are shown in Table VI. None of the observed F ratios exceed the critical F values at either the .05 or the .01 level of significance. Therefore, the null hypothesis of no treatment effect is not rejected by the analysis of group means adjusted for differences which existed prior to the treatment period. The results of this analysis leave us to conclude that there was no main treatment effect upon the treatment group





TABLE VI. Tests for Treatment Effect

Scale	Source	Df	MS	Fobs.
Time Orientation	Treatment Within	1 25	.0104 .423	.246
Support	Treatment Within	1 25	.0062 .0186	.335
Self Actualizing Values	Treatment Within	1 25	.622 5.059	.123
Existentiality	Treatment Within	1 25	20.475 5.989	3.419
Feeling Reactivity	Treatment Within	1 25	5.056 3.168	1.596
Spontaneity	Treatment Within	1 25	.892 4.234	.211
Self Regard	Treatment Within	1 25	.223 3.438	.065
Self Acceptance	Treatment Within	1 25	.100 7.344	.014
Nature of Man	Treatment Within	1 25	2.133 2.971	.718
Synergy	Treatment Within	1 25	.653 1.117	.557
Acceptance of Aggression	Treatment Within	1 25	7.085 5.244	1.351
Capacity for Intimate Contact	Treatment Within	1 25	4.136 6.441	.642

Critical F ratio at .05  $F'_{25} = 4.245$  at .01  $F'_{25} = 7.77$

\* Significant at .05 level.

\*\* Significant at .01 level.



mean responses for each of the scales.

### 3. Results for Hypothesis Three:

$H_{0_3}$ : There will be no significant treatment effect upon self orientation change as shown by the group mean change scores for each of the 10 subscales and a total change score.

For purposes of analysis, the hypothesis is written in the form:

$H_0: \mu_{C_1} - \mu_{C_2}$ . Mean change scores are shown in Table VII and the summary table for tests of homogeneity of variance is shown in Table VIII. It can be seen that the F ratios for seven of eleven of the scales indicate significant difference in variance for the two groups. In order to perform the analysis of variance for the test for differences between mean change scores, adjustments were made for differences in variance. The Welch Prime Adjustment procedure (Winer, 1962) was used to make the adjustment in critical values where there were differences in variances. The probabilities of the differences between group means occurring by chance, with and without the adjustment, are shown in Table IX.

The differences between the two groups on the Total Change scale, which represents the composite of change scores for the ten subscales, was significant beyond the .01 level. The differences between the two groups on the subscales: Self actualizing values, Existentiality, Acceptance of aggression, and Capacity for intimate contact, were all significant beyond the .05 level of significance. The differences for the subscales: Feeling reactivity, Spontaneity, and Synergy, although just short of significance at the .05 level, were in the same general direction as the differences for the other scales. For all subscales, except the Nature of man subscale, the change score means for the





TABLE VII.

## Mean Change Scores

Scale	Treatment Group Mean	Control Group Mean
SAV	2.57	1.36
Ex	4.21	2.00
Fr	2.50	1.29
Spon	2.79	1.50
Sr	2.36	1.29
Sa	3.50	2.00
Nm	1.57	1.79
Sy	1.07	.50
Aa	3.21	1.50
Cic	3.36	1.50
Total Change	27.14	14.71

TABLE VIII..

## Tests for Homogeneity of Variance

Scale	Treatment Variance	Control Variance	F ratio	P-nondirectional
SAV	3.65	0.86	4.229	.01
Ex	7.87	3.38	2.326	.14
Fr	3.35	1.76	1.903	.26
Spon	5.10	0.58	8.848	.00
Sr	4.40	1.14	3.851	.02
Sa	8.27	2.00	4.135	.02
Nm	2.26	1.26	1.799	.30
Sy	0.84	0.42	1.987	.23
Aa	5.41	1.50	3.608	.03
Cic	7.63	1.65	4.615	.01
Total Change	194.60	37.76	5.162	.01



TABLE IX. Analysis of Variance Summary Tables

Scale	Fobs	Probability	Adjusted Probability
SAV	4.575	.042	.046
Ex	6.096	.020	.022
Fr	4.044	.055	.056
Spon	4.072	.054	.061
Sr	2.900	.101	.105
Sa	3.066	.092	.096
Nm	.182	.673	.673
Sy	3.618	.068	.070
Aa	5.954	.022	.024
Cic	5.198	.031	.035
Total Change	9.296	.005	.007

Critical F value at .05  $F_{26}^{\eta} = 4.23$  at .01  $F_{26}^{\eta} = 7.72$





treatment group were larger than the corresponding means for the control group. Using the analysis of variance procedure, the null hypothesis of no treatment effect upon change scores was rejected for the scales:

Self actualizing values, Existentiality, Acceptance of aggression and Capacity for intimate contact. As well, the null hypothesis is rejected by the analysis of the Total Change scores for the two groups.

Lord (1963) has advised that when change scores are being used, the analysis of covariance technique should be used to partial out the effect of pre treatment differences between groups. This was done to compare the results with the analysis using adjusted critical values. The pre treatment raw scores were used as the covariate.

TABLE X. Mean and Adjusted Mean Change Scores

Scale	Unadjusted post treatment means		Covariate adjusted means	
	Treatment Group	Control Group	Treatment Group	Control Group
SAV	2.57	1.36	2.42	1.51
Ex	4.21	2.00	4.11	2.10
Fr	2.50	1.29	2.26	1.52
Spon	2.80	1.50	2.46	1.83
Sr	2.36	1.29	2.29	1.35
Sa	3.50	2.00	3.46	2.04
Nm	1.57	1.76	1.44	1.92
Sy	1.07	.50	1.08	.49
Aa	3.21	1.50	3.01	1.71
Cic	3.36	1.50	3.050	1.81



Summaries for the analysis of covariance tests for differences between adjusted mean change scores are shown in Table XI.

TABLE XI. Analysis of Covariance on Change Scores

Scale	Source	Df	MS	Fobs
SAV	Treatment	1	5.65	3.62
	Error	25	1.56	
Ex	Treatment	1	28.16	5.55*
	Error	25	5.07	
Fr	Treatment	1	3.62	2.18
	Error	25	1.66	
Spon	Treatment	1	2.53	1.47
	Error	25	1.72	
Sr	Treatment	1	6.03	3.50
	Error	25	1.72	
Sa	Treatment	1	14.20	3.54
	Error	25	4.01	
Nm	Treatment	1	1.58	1.70
	Error	25	.93	
Sy	Treatment	1	2.46	4.59*
	Error	25	.54	
Aa	Treatment	1	11.40	4.47*
	Error	25	2.55	
Cic	Treatment	1	10.10	3.02
	Error	25	3.33	

Critical F value at .05  $F'_{25} = 4.245$  at .01  $F'_{25} = 7.77$

\* Significant at .05 level.

\*\* Significant at .01 level.

When the mean change scores are adjusted for pre treatment differences between the two groups, significant differences between groups, in terms of the mean amount of change, are found for the subscales: Existentiality, Synergy,





and Acceptance of aggression. These results differ from the previous analysis in that the differences for the subscales, Self actualizing values and Capacity for intimate contact, were shown by the analysis of variance to be significant and conversely shown by the analysis of covariance to be short of significance at the .05 level. For the subscale, Synergy, the analysis of covariance shows significant difference whereas the analysis of variance did not.

Several conclusions can be drawn from the analysis of variance, analysis of covariance, and tests for homogeneity of variance results. The large differences in variances for the change scores for the two groups suggests that the control group experienced a lower amount of change in a consistent fashion; whereas, the treatment group shows a highly inconsistent amount of change. That is, the members of the treatment group varied widely in the amount and direction of change. For the control group on the other hand, the members all experienced similar amounts of change. This suggests that there was a significant treatment effect upon change scores. The differences between mean scores shown by the F ratios from the analysis of variance and the analysis of covariance support this suggestion. Most of the differences would be significant at the .10 level of significance ( $F'_{26} = 2.91$ ).

It can be concluded that the treatment group did experience more change in self orientation than the control group. This change occurred in different directions and in different amounts for the members of the T-group so that the null hypothesis of no main treatment effect was not rejected. Certain subscales reflect higher amounts of change and greater variability of change than others, indicating that these scales were perhaps more relevant to the focus of the T-group experience than other



scales. It may be concluded that participants in T-group experiences do undergo change in self orientation which exceeds, in terms of amount, the changes experienced by non-participants during the same period of time.





## CHAPTER SEVEN

## CONCLUSIONS AND IMPLICATIONS

## A. Conclusions

Comparison of the two groups, using the pre treatment responses on the self orientation measure, indicated that the two samples were taken from the same general population. When the effect of the pre treatment differences (not significant), which did exist between the two groups, were partialled out, there was no significant difference between the post treatment group mean scores on any of the scales of the self orientation measure used. From this, we would conclude that there **was** no main treatment effect on self orientation.

This was further borne out by the examination of the amounts of change, without regard for direction, experienced by the experimental subjects in the two groups. Noticeably, the variability of the change scores for the two groups differed. This difference in variability was significant for the Total Change score and six of the subscales on the measurement instrument. This indicates that; in the treatment group, some of the individuals experienced a great deal of change and others only a small amount; whereas, in the control group, the amounts of change were more consistent among the non treatment group members. Generally, participants in the T-group experience demonstrated a greater amount of change in self orientation than was demonstrated by the non treatment control group. When the total amount of change on the subscales of the self orientation measures for each individual was treated as a change score and the mean change scores for the two groups were compared, the results indicated a



highly significant difference. In addition, several of the subscales on the measurements of self orientation reflected differences in the amount of change which proved to be significant at the .05 level. From this, we might conclude that the T-group treatment does have a main effect upon self orientation change. The strength of this conclusion is somewhat diminished by the well recognized shortcomings involved in the use of change scores. The error rate increases with the rate of the reliability of the instrument.

The results are also to be questioned by reason of the limitations inherent in the study. The selection bias might still account for the significant differences in the Total Change scores and the subscales of Self actualizing values, Existentiality, Synergy, Acceptance of aggression, and Capacity for intimate contact. The effect of the interaction between the self orientation measurement instrument and the treatment itself, may have been influential in determining the results obtained. The test may have sensitized the treatment subjects to the extent that greater self orientation change occurred than would have occurred given the treatment alone.

The measurement instrument did show that there were significant differences in the amounts of change for the two groups. There are several possibilities:

1. The treatment did lead to greater change but not to any specific direction of change for all members.
2. The treatment did lead to a specific direction of change in self orientation which the instrument did not demonstrate.
3. Experimental influences other than the treatment or the measurement instruments contaminated the study leading to





the results obtained.

4. The instrument does not measure self orientation or self orientation changes which occur in the T-group setting.
- or 5. The instrument measures something other than self orientation such as mood or social desirability.

The value of this study hinges upon the efficacy of the first possible alternative. If any of the other alternatives are true, then the results do not have value. When change scores are used to compare a treatment group such as a T-group experience with a non treatment sample, the probability that situation five represents the true situation is increased. The distinctive last session mood level of T-group participants very likely does find expression in the responses on the measurement instrument. As the control group did not experience this same phenomenon, it may be that the reflected amount of change was a function of mood differences and not treatment effect. There is no evidence to show the influence of mood upon responses on the Personal Orientation Inventory. As well, the current literature on self actualization may be influential in increasing the effect of social desirability in responses to the POI. This is particularly relevant where the population is that of graduate students in psychology who have been deliberately exposed to humanistic viewpoints. It is hoped that the Personal Orientation Inventory did discriminate between the groups in the expected fashion; but the question about its real sensitivity to self orientation changes remains unanswered.

## B. Implications

Given the limitations of the study design and the loss of reliability



associated with the use of change scores, the value of the results of this study is limited. The largest contribution of this study stems from the demonstration that no main treatment effect on self orientation was found but that there was a significant effect on the amount and variability of change in self orientation. The T-group experience in this study did not lead the participants to see themselves in the same way. The changes experienced by T-group participants were seen to be in different directions and of different degrees. Despite the limitations inherent in the study reported in this thesis, the results obtained have some implications for future research and cultural adjustment.

### 1. Implications for future research

Future study of the impact of the T-group experience upon the self orientation of each participant would benefit from a more deliberate analysis of the differences between individuals and the attributes specific to the T-group experience under investigation.

#### a, individual differences

The experience is most unlike a math class in which the teacher attempts to introduce the student to specified skills whose acquisition can be readily demonstrated by performance on a paper-pencil assessment of math skills. In the T-group, each individual has his own personal learning goals, style and framework. As the study results have shown, each individual learns something appropriate to his own unique personal orientation and the researcher would be wise, when investigating change in self orientation, not to look for a main treatment effect on self orientation. Measurement of what the experience means to the way each individual sees himself remains an arduous task as the researcher must attune his measurement devices to individual differences. Taking





a behaviorist approach, the experimenter might be wise to supplement any paper-pencil measures of self orientation with individual interview procedures, log and diary records, and audio or video tapes of the individual during the course of the T-group experience. From these subjective reports and behavioral records, the experimenter might be able to collect information indicative of each individual's private self orientation. In addition, the researcher might be able to observe relationships between the activities in which the individual engages himself during the experience and the changes in self orientation which he demonstrates.

b, attributes specific to the treatment group under study

Each T-group, by reason of its own specific mix of participants, is inherently unique. Although the experience may qualify as a T-group as conceptualized in Chapter Three, the interaction of the many needs, behavior repertoires, perceptions, and self orientations of the many participants making up the T-group will result in a community specific to the given experimental situation. As a result, the researcher needs to attune his experimental efforts to the inherently unique attributes which are involved as treatment variables. For example, from a subjective assessment of the results of this study, some similarities were observed between the results obtained on specific subscales of the POI and what would be expected from an awareness of the personal style and focus of the trainer of the treatment group. Unfortunately, this study was not designed to be sensitive to such relationships and this observation was only *a posteriori*. The researcher interested in a true assessment of the relationships between T-group participation and changes in self orientation would be advised to attempt to measure the following



variables: the degrees of feedback, self disclosure, trust, and collaboration; the self orientation and behavior of the trainer; the extent to which a focus on the here-and-now was maintained; group norms and atmosphere; the exercise activities of the group; and, the subjective reports of the value of the group to the participants involved. These variables could then be related to the observed changes in a descriptive sense.

### c, an idealized design

In order to fully isolate the effect of the many variables which comprise the T-group experience, the researcher would be advised to employ many treatment groups in his experimental design. With a large number of groups, the experimenter has the ability to manipulate these many variables. For example, the minimally acceptable design as a true experiment investigating the relationship between T-group participation and self orientation change would require random assignment to groups and random assignment of experimental conditions with the following pattern:

R	O	X	O	-	a T-group treatment
R	O		O	-	no treatment, no grouping
R	O		O	-	no treatment, same time in group
R		X	O	-	a T-group treatment
R			O	-	no treatment, no grouping
R			O	-	no treatment, same time in group.

With this design the experimenter, as reported by Campbell and Stanley (1970), is able to control for all of the internal sources of invalidity and for the effect of test-treatment interaction. In addition, the experimenter would be able to partial out the effect of 'time together'





as a treatment variable. Once able to do this, the experimenter is able to assess the relationship between the composite of variables making up the given T-group experiences and changes in self orientation. If he wishes to explain in greater detail, the relationship between any one of these variables and self orientation change, then further groups would be necessary allowing manipulation of the quantity of the given variable to which the participants are exposed. Recognizing the difficulty in collecting the many subjects necessary for such a design, it is acknowledged that the researcher may have to resign himself to studying these relationships by focussing on the unique attributes of a given treatment group and relating these to the group treatment outcome.

#### d, summary and general advise

In summary, the basic postulate underlying this study requires further investigation. The task remains to test the validity of the postulate that T-group participants will experience significant changes in self orientation and that those changes would not be experienced in normal modes of living in Canadian society. In future studies, greater effort should be made in the explanation and definition of concepts. More sophisticated study designs, where possible, should definitely be employed. As the treatment conditions tend to be quite distinctive, the researcher would do well to describe, in detail, the specific nature of the treatment experience(s) and the involvement of each individual in the experiment. Further research on the T-group process itself is certainly justified as there are many differences between the many experiences commonly referred to by the generic term, T-group. The researcher is advised to pre test at least one day before the beginning of the treatment period and to post test no sooner than two days after the treatment period.



Finally, the researcher might wisely seek out non-university populations with a high degree of naivety as to his research objectives. In this way, the effects of subject expectation might be decreased.

## 2. Implications for cultural adjustment

In the introductory chapter of this thesis, a staunch cultural criticism was directed at the tendency in Canadian society for certain behaviors to be implicitly outlawed or restrained. The essence of the argument was that without free expression of need relevant behavior, direct and open feedback, and self disclosure and where the orientation to time was pressured away from the present, the development of realistic self orientation would be made most difficult. As the T-group experience was described as one learning experience which inherently contained these necessary behavioral ingredients, any investigation of this phenomenon, it was hoped, would cast additional light.

Although this study has many limitations, the results obtained do speak to an injunction for a legitimation of certain behaviors in Canadian society. The T-group setting in this experiment, which did legitimize freer expression of need relevant behavior, direct and open communication, a here-and-now time orientation, and a higher level of self disclosure, was found to contribute toward change in self orientation. Unfortunately, this study did not investigate the inter-relationships between these behaviors and self orientation change nor did it involve an assessment of the reality of the self orientations developed during the treatment period. Nevertheless, the results obtained do suggest that a learning experience such as the T-group experience does influence self orientation and does, therefore, suggest that certain cultural adaptations might be argued for.





During the past five years, there has been a degree of social change which might be considered to have its origins in the human potential movement which is closely aligned to the T-group learning experience. Presently, some of this social impact is diminishing. This may, in part, be attributable to a lack of empirical evidence to support the underlying postulates presented by proponents of a less restrictive society modelled after the mixture of crucial learning factors common to the T-group experience. Further research involving a test of the relationships between these learning factors and self orientation change would be advised.



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## APPENDIX A



## PERSONAL ORIENTATION INVENTORY

EVERETT L. SHOSTROM, Ph.D.

## DIRECTIONS

This inventory consists of pairs of numbered statements. Read each statement and decide which of the two paired statements most consistently applies to you.

You are to mark your answers on the answer sheet you have. Look at the example of the answer sheet shown at the right.

If the first statement of the pair is TRUE or MOSTLY TRUE as applied to you, blacken between the lines in the column headed "a". (See Example Item 1 at right.)

Section of Answer  
Column Correctly  
Marked

If the second statement of the pair is TRUE or MOSTLY TRUE as applied to you, blacken between the lines in the column headed "b". (See Example Item 2 at right.)

	a	b
	..	..
1.	..	..
	a	b
	..	..
2.	..	..
	..	..

If neither statement applies to you, or if they refer to something you don't know about, make no answer on the answer sheet. Remember to give YOUR OWN opinion of yourself and do not leave any blank spaces if you can avoid it.

In marking your answers on the answer sheet, be sure that the number of the statement agrees with the number on the answer sheet. Make your marks heavy and black. Erase completely any answer you wish to change. Do not make any marks in this booklet.

Remember, try to make some answer to every statement.

Before you begin the inventory, be sure you put your name, your sex, your age, and the other information called for in the space provided on the answer sheet.

NOW OPEN THE BOOKLET AND START WITH QUESTION 1.





1. a. I am bound by the principle of fairness.  
b. I am not absolutely bound by the principle of fairness.
2. a. When a friend does me a favor, I feel that I must return it.  
b. When a friend does me a favor, I do not feel that I must return it.
3. a. I feel I must always tell the truth.  
b. I do not always tell the truth.
4. a. No matter how hard I try, my feelings are often hurt.  
b. If I manage the situation right, I can avoid being hurt.
5. a. I feel that I must strive for perfection in everything that I undertake.  
b. I do not feel that I must strive for perfection in everything that I undertake.
6. a. I often make my decisions spontaneously.  
b. I seldom make my decisions spontaneously.
7. a. I am afraid to be myself.  
b. I am not afraid to be myself.
8. a. I feel obligated when a stranger does me a favor.  
b. I do not feel obligated when a stranger does me a favor.
9. a. I feel that I have a right to expect others to do what I want of them.  
b. I do not feel that I have a right to expect others to do what I want of them.
10. a. I live by values which are in agreement with others.  
b. I live by values which are primarily based on my own feelings.



11. a. I am concerned with self-improvement at all times.  
b. I am not concerned with self-improvement at all times.
12. a. I feel guilty when I am selfish.  
b. I don't feel guilty when I am selfish.
13. a. I have no objection to getting angry.  
b. Anger is something I try to avoid.
14. a. For me, anything is possible if I believe in myself.  
b. I have a lot of natural limitations even though I believe in myself.
15. a. I put others' interests before my own.  
b. I do not put others' interests before my own.
16. a. I sometimes feel embarrassed by compliments.  
b. I am not embarrassed by compliments.
17. a. I believe it is important to accept others as they are.  
b. I believe it is important to understand why others are as they are.
18. a. I can put off until tomorrow what I ought to do today.  
b. I don't put off until tomorrow what I ought to do today.
19. a. I can give without requiring the other person to appreciate what I give.  
b. I have a right to expect the other person to appreciate what I give.
20. a. My moral values are dictated by society.  
b. My moral values are self-determined.
21. a. I do what others expect of me.  
b. I feel free to not do what others expect of me.





22. a. I accept my weaknesses.  
b. I don't accept my weaknesses.
23. a. In order to grow emotionally, it is necessary to know why I act as I do.  
b. In order to grow emotionally, it is not necessary to know why I act as I do.
24. a. Sometimes I am cross when I am not feeling well.  
b. I am hardly ever cross.
25. a. It is necessary that others approve of what I do.  
b. It is not always necessary that others approve of what I do.
26. a. I am afraid of making mistakes.  
b. I am not afraid of making mistakes.
27. a. I trust the decisions I make spontaneously.  
b. I do not trust the decisions I make spontaneously.
28. a. My feelings of self-worth depend on how much I accomplish.  
b. My feelings of self-worth do not depend on how much I accomplish.
29. a. I fear failure.  
b. I do not fear failure.
30. a. My moral values are determined, for the most part, by the thoughts, feelings and decisions of others.  
b. My moral values are not determined, for the most part, by the thoughts, feelings and decisions of others.
31. a. It is possible to live life in terms of what I want to do.  
b. It is not possible to live life in terms of what I want to do.



32. a. I can cope with the ups and downs of life.  
b. I cannot cope with the ups and downs of life.
33. a. I believe in saying what I feel in dealing with others.  
b. I do not believe in saying what I feel in dealing with others.
34. a. Children should realize that they do not have the same rights and privileges as adults.  
b. It is not important to make an issue of rights and privileges.
35. a. I can "stick my neck out" in my relations with others.  
b. I avoid "sticking my neck out" in my relations with others.
36. a. I believe the pursuit of self-interest is opposed to interest in others.  
b. I believe the pursuit of self-interest is not opposed to interest in others.
37. a. I find that I have rejected many of the moral values I was taught.  
b. I have not rejected any of the moral values I was taught.
38. a. I live in terms of my wants, likes, dislikes and values.  
b. I do not live in terms of my wants, likes, dislikes and values.
39. a. I trust my ability to size up a situation.  
b. I do not trust my ability to size up a situation.
40. a. I believe that I have an innate capacity to cope with life.  
b. I do not believe I have an innate capacity to cope with life.
41. a. I must justify my actions in the pursuit of my own interests.  
b. I need not justify my actions in the pursuit of my own interests.
42. a. I am bothered by fears of being inadequate.





42. b. I am not bothered by fears of being inadequate.
43. a. I believe that man is essentially good and can be trusted.  
b. I believe that man is essentially evil and cannot be trusted.
44. a. I live by the rules and standards of society.  
b. I do not always need to live by the rules and standards of society.
45. a. I am bound by my duties and obligations to others.  
b. I am not bound by my duties and obligations to others.
46. a. Reasons are needed to justify my feelings.  
b. Reasons are not needed to justify my feelings.
47. a. There are times when just being silent is the best way I can express my feelings.  
b. I find it difficult to express my feelings by just being silent.
48. a. I often feel it necessary to defend my past actions.  
b. I do not feel it necessary to defend my past actions.
49. a. I like everyone I know.  
b. I do not like everyone I know.
50. a. Criticism threatens my self-esteem.  
b. Criticism does not threaten my self-esteem.
51. a. I believe that knowledge of what is right makes people act right.  
b. I do not believe that knowledge of what is right necessarily makes people act right.
52. a. I am afraid to be angry at those I love.  
b. I feel free to be angry at those I love.



53. a. My basic responsibility is to be aware of my own needs.  
b. My basic responsibility is to be aware of others' needs.
54. a. Impressing others is most important.  
b. Expressing myself is most important.
55. a. To feel right, I need always to please others.  
b. I can feel right without always having to please others.
56. a. I will risk a friendship in order to say or do what I believe is right.  
b. I will not risk a friendship just to say or do what is right.
57. a. I feel bound to keep the promises I make.  
b. I do not always feel bound to keep the promises I make.
58. a. I must avoid sorrow at all costs.  
b. It is not necessary for me to avoid sorrow.
59. a. I strive always to predict what will happen in the future.  
b. I do not feel it necessary always to predict what will happen in the future.
60. a. It is important that others accept my point of view.  
b. It is not necessary for others to accept my point of view.
61. a. I only feel free to express warm feelings to my friends.  
b. I feel free to express both warm and hostile feelings to my friends.
62. a. There are many times when it is more important to express feelings than to carefully evaluate the situation.  
b. There are very few times when it is more important to express feelings than to carefully evaluate the situation.





63. a. I welcome criticism as an opportunity for growth.  
b. I do not welcome criticism as an opportunity for growth.
64. a. Appearances are all-important.  
b. Appearances are not terribly important.
65. a. I hardly ever gossip.  
b. I gossip a little at times.
66. a. I feel free to reveal my weaknesses among friends.  
b. I do not feel free to reveal my weaknesses among friends.
67. a. I should always assume responsibility for other people's feelings.  
b. I need not always assume responsibility for other people's feelings.
68. a. I feel free to be myself and bear the consequences.  
b. I do not feel free to be myself and bear the consequences.
69. a. I already know all I need to know about my feelings.  
b. As life goes on, I continue to know more and more about my feelings.
70. a. I hesitate to show my weaknesses among strangers.  
b. I do not hesitate to show my weaknesses among strangers.
71. a. I will continue to grow only by setting my sights on a high-level, socially approved goal.  
b. I will continue to grow best by being myself.
72. a. I accept inconsistencies within myself.  
b. I cannot accept inconsistencies within myself.
73. a. Man is naturally cooperative.



73. b. Man is naturally antagonistic.
74. a. I don't mind laughing at a dirty joke.  
b. I hardly ever laugh at a dirty joke.
75. a. Happiness is a by-product in human relationships.  
b. Happiness is an end in human relationships.
76. a. I only feel free to show friendly feelings to strangers.  
b. I feel free to show both friendly and unfriendly feelings to strangers.
77. a. I try to be sincere but I sometimes fail.  
b. I try to be sincere and I am sincere.
78. a. Self-interest is natural.  
b. Self-interest is unnatural.
79. a. A neutral party can measure a happy relationship by observation.  
b. A neutral party cannot measure a happy relationship by observation.
80. a. For me, work and play are the same.  
b. For me, work and play are opposites.
81. a. Two people will get along best if each concentrates on pleasing the other.  
b. Two people can get along best if each person feels free to express himself.
82. a. I have feelings of resentment about things that are past.  
b. I do not have feelings of resentment about things that are past.
83. a. I like only masculine men and feminine women.  
b. I like men and women who show masculinity as well as femininity.





84. a. I actively attempt to avoid embarrassment whenever I can.  
b. I do not actively attempt to avoid embarrassment.
85. a. I blame my parents for a lot of my troubles.  
b. I do not blame my parents for my troubles.
86. a. I feel that a person should be silly only at the right time and place.  
b. I can be silly when I feel like it.
87. a. People should always repent their wrongdoings.  
b. People need not always repent their wrongdoings.
88. a. I worry about the future.  
b. I do not worry about the future.
89. a. Kindness and ruthlessness must be opposites.  
b. Kindness and ruthlessness need not be opposites.
90. a. I prefer to save good things for future use.  
b. I prefer to use good things now.
91. a. People should always control their anger.  
b. People should express honestly-felt anger.
92. a. The truly spiritual man is sometimes sensual.  
b. The truly spiritual man is never sensual.
93. a. I am able to express my feelings even when they sometimes result in undesirable consequences.  
b. I am unable to express my feelings if they are likely to result in undesirable consequences.
94. a. I am often ashamed of some of the emotions that I feel bubbling up within me.



94. b. I do not feel ashamed of my emotions.
95. a. I have had mysterious or ecstatic experiences.  
b. I have never had mysterious or ecstatic experiences.
96. a. I am orthodoxly religious.  
b. I am not orthodoxly religious.
97. a. I am completely free of guilt.  
b. I am not free of guilt.
98. a. I have a problem in fusing sex and love.  
b. I have no problem in fusing sex and love.
99. a. I enjoy detachment and privacy.  
b. I do not enjoy detachment and privacy.
100. a. I feel dedicated to my work.  
b. I do not feel dedicated to my work.
101. a. I can express affection regardless of whether it is returned.  
b. I cannot express affection unless I am sure it will be returned.
102. a. Living for the future is as important as living for the moment.  
b. Only living for the moment is important.
103. a. It is better to be yourself.  
b. It is better to be popular.
104. a. Wishing and imagining can be bad.  
b. Wishing and imagining are always good.
105. a. I spend more time preparing to live.





105. b. I spend more time actually living.
106. a. I am loved because I give love.  
b. I am loved because I am lovable.
107. a. When I really love myself, everybody will love me.  
b. When I really love myself, there will still be those who won't love me.
108. a. I can let other people control me.  
b. I can let other people control me if I am sure they will not continue to control me.
109. a. As they are, people sometimes annoy me.  
b. As they are, people do not annoy me.
110. a. Living for the future gives my life its primary meaning.  
b. Only when living for the future ties into living for the present does my life have meaning.
111. a. I follow diligently the motto, "Don't waste your time."  
b. I do not feel bound by the motto, "Don't waste your time."
112. a. What I have been in the past dictates the kind of person I will be.  
b. What I have been in the past does not necessarily dictate the kind of person I will be.
113. a. It is important to me how I live in the here and now.  
b. It is of little importance to me how I live in the here and now.
114. a. I have had an experience where life seemed just perfect.  
b. I have never had an experience where life seemed just perfect.
115. a. Evil is the result of frustration in trying to be good.



115. b. Evil is an intrinsic part of human nature which fights good.
116. a. A person can completely change his essential nature.  
b. A person can never change his essential nature.
117. a. I am afraid to be tender.  
b. I am not afraid to be tender.
118. a. I am assertive and affirming.  
b. I am not assertive and affirming.
119. a. Women should be trusting and yielding.  
b. Women should not be trusting and yielding.
120. a. I see myself as others see me.  
b. I do not see myself as others see me.
121. a. It is a good idea to think about your greatest potential.  
b. A person who thinks about his greatest potential gets conceited.
122. a. Men should be assertive and affirming.  
b. Men should not be assertive and affirming.
123. a. I am able to risk being myself.  
b. I am not able to risk being myself.
124. a. I feel the need to be doing something significant all of the time.  
b. I do not feel the need to be doing something significant all of the time.
125. a. I suffer from memories.  
b. I do not suffer from memories.





126. a. Men and women must be both yielding and assertive.  
b. Men and women must not be both yielding and assertive.
127. a. I like to participate actively in intense discussions.  
b. I do not like to participate actively in intense discussions.
128. a. I am self-sufficient.  
b. I am not self-sufficient.
129. a. I like to withdraw from others for extended periods of time.  
b. I do not like to withdraw from others for extended periods of time.
130. a. I always play fair.  
b. Sometimes I cheat a little.
131. a. Sometimes I feel so angry I want to destroy or hurt others.  
b. I never feel so angry that I want to destroy or hurt others.
132. a. I feel certain and secure in my relationships with others.  
b. I feel uncertain and insecure in my relationships with others.
133. a. I like to withdraw temporarily from others.  
b. I do not like to withdraw temporarily from others.
134. a. I can accept my mistakes.  
b. I cannot accept my mistakes.
135. a. I find some people who are stupid and uninteresting.  
b. I never find any people who are stupid and uninteresting.
136. a. I regret my past.  
b. I do not regret my past.



137. a. Being myself is helpful to others.  
b. Just being myself is not helpful to others.
138. a. I have had moments of intense happiness when I felt like I was experiencing a kind of ecstasy or bliss.  
b. I have not had moments of intense happiness when I felt like I was experiencing a kind of bliss.
139. a. People have an instinct for evil.  
b. People do not have an instinct for evil.
140. a. For me, the future usually seems hopeful.  
b. For me, the future often seems hopeless.
141. a. People are both good and evil.  
b. People are not both good and evil.
142. a. My past is a stepping stone for the future.  
b. My past is a handicap to my future.
143. a. "Killing time" is a problem for me.  
b. "Killing time" is not a problem for me.
144. a. For me, past, present and future is in meaningful continuity.  
b. For me, the present is an island, unrelated to the past and future.
145. a. My hope for the future depends on having friends.  
b. My hope for the future does not depend on having friends.
146. a. I can like people without having to approve of them.  
b. I cannot like people unless I also approve of them.
147. a. People are basically good.





147. b. People are not basically good.
148. a. Honesty is always the best policy.  
b. There are times when honesty is not the best policy.
149. a. I can feel comfortable with less than a perfect performance.  
b. I feel uncomfortable with anything less than a perfect performance.
150. a. I can overcome any obstacles as long as I believe in myself.  
b. I cannot overcome every obstacle even if I believe in myself.



## APPENDIX B





## APPENDIX B. Scale Compositions

### Time Incompetence Items (T<sub>I</sub>)

- a. 48, 59, 82, 87, 88, 90, 105, 110, 111, 112, 124, 125, 129, 136, 143, 145.
  - b. 102, 104, 113, 133, 140, 142, 144.
- 

### Time Competence Items (T<sub>C</sub>)

- a. 102, 104, 113, 133, 140, 142, 144.
  - b. 48, 59, 82, 87, 88, 90, 105, 110, 111, 112, 124, 125, 129, 136, 143, 145.
- 

### Other Support Items (O)

- a. 1, 2, 3, 5, 7, 8, 9, 10, 11, 12, 14, 15, 16, 20, 21, 23, 25, 26, 28, 29, 30, 34, 36, 41, 42, 44, 45, 46, 49, 50, 51, 52, 53, 54, 55, 57, 58, 60, 61, 64, 65, 67, 69, 70, 71, 76, 79, 81, 83, 84, 85, 86, 89, 91, 94, 96, 97, 98, 106, 107, 116, 117, 130, 139, 148, 150.
  - b. 4, 6, 13, 17, 18, 19, 22, 24, 27, 31, 32, 33, 35, 37, 38, 39, 40, 43, 47, 56, 62, 63, 66, 68, 72, 73, 74, 75, 77, 78, 80, 92, 93, 95, 99, 100, 101, 103, 108, 109, 114, 115, 118, 119, 120, 121, 122, 123, 126, 127, 128, 131, 132, 134, 135, 137, 138, 141, 146, 147, 149.
- 

### Inner Support Items (I)

- a. 4, 6, 13, 17, 18, 19, 22, 24, 27, 31, 32, 33, 35, 37, 38, 39, 40, 43, 47, 53, 56, 62, 63, 66, 68, 72, 73, 74, 75, 77, 78, 80, 92, 93, 95, 99, 100, 101, 103, 108, 109, 114, 115, 118, 119, 120, 121, 122, 123, 126, 127, 128, 131, 132, 134, 135, 137, 138, 141, 146, 147, 149.
- 152.



Scale Compositions, Cont'd.

- b. 1, 2, 3, 5, 7, 8, 9, 10, 11, 12, 14, 15, 16, 20, 21, 23, 25, 26, 28, 29, 30, 34, 36, 41, 42, 44, 45,  
46, 49, 50, 51, 52, 54, 55, 57, 58, 60, 61, 64, 65, 67, 69, 70, 71, 76, 79, 81, 83, 84, 85, 86, 89, 91,  
94, 96, 97, 98, 106, 107, 116, 117, 130, 139, 148, 150.

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Self Actualizing Value (SAV)

- a. 6, 27, 38, 43, 68, 80, 92, 99, 100, 103, 114, 118, 121, 123, 128, 133, 135, 138, 141, 146, 147.  
b. 10, 20, 36, 89, 98.

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Existentiality (Ex)

- a. 11, 18, 19, 31, 56, 74, 80, 92, 149.  
b. 1, 2, 3, 5, 8, 9, 21, 36, 44, 45, 54, 57, 64, 67, 86, 89, 96, 98, 111, 124, 130, 143, 148.

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Feeling Reactivity (Fr)

- a. 4, 13, 16, 33, 38, 47, 53, 62, 93, 95, 101, 131.  
b. 10, 15, 52, 55, 58, 61, 69, 76, 91, 94, 117.
-





Scale Compositions Cont'd.

Spontaneity (Spon)

- a. 1, 6, 27, 35, 62, 68, 74, 101, 123, 137, 138.
- b. 41, 52, 54, 81, 84, 85, 86.

---

Self Regard (Sr)

- a. 31, 32, 38, 39, 40, 68, 78, 118, 121, 128, 132, 149.
- b. 7, 16, 48, 60.

---

Self Acceptance (Sa)

- a. 22, 24, 37, 63, 66, 72, 77, 134.
- b. 3, 5, 12, 14, 26, 28, 29, 41, 42, 48, 50, 65, 70, 71, 87, 107, 128, 150.

---

Nature of Man (Nm)

- a. 40, 43, 73, 78, 92, 115, 119, 122, 126, 141, 147.
  - b. 36, 83, 98, 116, 139.
-



## Scale Compositions Cont'd.

### Synergy (Sy)

- a. 80, 92, 137, 141, 144, 146.
  - b. 36, 89, 98.
- 

### Acceptance of Aggression (Aa)

- a. 13, 24, 33, 56, 63, 93, 109, 118, 122, 123, 131, 135, 146.
  - b. 50, 52, 61, 70, 73, 76, 79, 84, 89, 91, 115, 130.
- 

### Capacity for Intimate Contact (Cic)

- a. 19, 33, 53, 103, 108, 127.
  - b. 1, 2, 8, 21, 25, 36, 44, 45, 49, 52, 54, 55, 57, 60, 61, 67, 70, 76, 81, 106, 107, 117.
-





## APPENDIX C

### THE POI RESPONSE FORM



Name \_\_\_\_\_ Last \_\_\_\_\_ First \_\_\_\_\_ Middle \_\_\_\_\_

Age \_\_\_\_\_ Date \_\_\_\_\_ Sex ☐ M ☐ F

Married ☐ Single ☐ Divorced ☐ Widowed ☐

Number of years of school completed \_\_\_\_\_

Religious preference \_\_\_\_\_

Occupation \_\_\_\_\_

## SCORES

0. NA \_\_\_\_\_ 7. Fr \_\_\_\_\_

1. Ti \_\_\_\_\_ 8. S \_\_\_\_\_

2. TC \_\_\_\_\_ 9. Sr \_\_\_\_\_

3. O \_\_\_\_\_ 10. Sa \_\_\_\_\_

4. I \_\_\_\_\_ 11. Nc \_\_\_\_\_

5. SAV \_\_\_\_\_ 12. Sy \_\_\_\_\_

6. Ex \_\_\_\_\_ 13. A \_\_\_\_\_

14. C \_\_\_\_\_

## PERSONAL ORIENTATION INVENTORY

By

EVERETT L. SHOSTROM

PUBLISHED BY

EDUCATIONAL AND INDUSTRIAL TESTING SERVICE

1	A	B	26	A	B	51	A	B	76	A	B	101	A	B	126	A	B
2			27			52			77			102			127		
3			28			53			78			103			128		
4			29			54			79			104			129		
5			30			55			80			105			130		
6	A	B	31	A	B	56	A	B	81	A	B	106	A	B	131	A	B
7			32			57			82			107			132		
8			33			58			83			108			133		
9			34			59			84			109			134		
10			35			60			85			110			135		
11	A	B	36	A	B	61	A	B	86	A	B	111	A	B	136	A	B
12			37			62			87			112			137		
13			38			63			88			113			138		
14			39			64			89			114			139		
15			40			65			90			115			140		
16	A	B	41	A	B	66	A	B	91	A	B	116	A	B	141	A	B
17			42			67			92			117			142		
18			43			68			93			118			143		
19			44			69			94			119			144		
20	A	B	45	A	B	70	A	B	95	A	B	120	A	B	145	A	B
21			46			71			96			121			146		
22			47			72			97			122			147		
23			48			73			98			123			148		
24			49			74			99			124			149		
25			50			75			100			125			150		





## APPENDIX D



### A. Time Orientation and Support.

157.





## Raw Data and Change Scores, Cont'd.

## B. Raw Scores: Subscales.

	SAV		Ex		Fr		Spon		Sr	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
EDGMJ	22	23	19	23	18	17	12	14	12	12
EMFEF	18	25	19	24	10	15	10	16	12	16
EMKGR	17	21	20	27	16	15	11	11	06	11
EMRWM	20	22	21	26	15	17	14	16	15	15
FZKS	25	24	31	29	20	21	18	17	16	16
GMLAT	23	20	17	25	14	17	11	14	10	14
HABJS	19	22	19	20	11	14	09	12	08	12
INSM	24	24	27	31	19	22	15	16	12	13
KKOEK	22	19	20	20	17	17	12	07	12	07
LLLIH	15	20	15	25	08	15	05	13	09	13
MESBB	20	20	19	20	19	22	14	12	13	13
PMCFL	22	24	26	30	17	15	13	12	10	14
SKSST	19	17	27	29	17	20	16	15	12	12
TFDEC	21	17	23	28	18	19	13	15	15	13
ASLK	22	21	18	21	15	15	16	15	10	13
CTBJE	20	20	22	22	16	15	13	11	06	08
EGCC	22	23	26	27	17	17	16	15	15	15
FMSRN	24	25	25	28	21	22	18	17	14	14
HMDCW	22	21	24	29	19	16	12	15	11	13
JMEM	22	24	29	30	20	20	17	18	12	13
JMLC	23	25	19	18	14	17	14	15	15	14
JMTDS	18	21	16	20	11	15	10	13	11	11
KSWK	23	24	26	26	18	18	16	17	15	15
MBUHA	17	20	23	28	17	18	12	14	10	13
MDSJH	24	25	18	21	20	21	11	13	12	13
MMFTA	19	17	23	25	15	15	12	13	10	09
SMWM	21	20	25	25	19	21	15	16	12	14
SDJM	22	22	22	22	19	17	15	13	14	16



## Raw Data and Change Scores, Cont'd.

## B. Raw Scores: Subscales (Continued).

	Sa		Nm		Sy		Aa		Cic	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
EDGMJ	17	19	13	14	07	09	18	14	16	15
EMFEF	14	21	14	13	07	09	12	21	15	20
EMKGR	12	21	10	13	08	09	16	16	16	20
EMRWM	20	20	13	13	08	08	18	21	21	21
FZKS	24	23	11	14	09	08	23	22	24	23
GMLAT	13	21	13	13	08	08	16	20	16	23
HABJS	16	16	15	15	07	08	06	12	14	16
INSMM	13	17	14	13	09	09	18	20	22	27
KKOEK	12	09	12	11	07	05	16	14	18	15
LLLIH	15	19	08	11	05	08	11	16	11	21
MESBB	19	16	08	12	08	09	21	22	22	25
PMCFL	18	19	13	14	08	09	14	17	21	21
SKSST	21	19	14	14	08	08	21	18	25	22
TFDEC	14	19	10	06	05	04	17	19	21	24
ASLK	17	20	11	15	06	06	15	17	17	16
CTBJE	16	18	10	12	07	07	18	14	21	20
EGCC	18	21	14	15	08	08	20	18	21	22
FMSRN	17	17	14	15	08	08	18	19	22	23
HMDCW	16	20	13	16	08	09	17	16	20	23
JMEM	23	25	12	13	09	08	20	20	24	25
JMLC	13	14	15	14	09	09	18	19	18	17
JMTDS	15	16	11	13	07	08	12	13	15	20
KSWK	14	18	13	13	07	07	17	17	25	24
MBUHA	18	22	10	13	06	07	17	18	21	22
MDSJH	13	15	11	12	08	08	17	21	19	21
MMFTA	19	20	14	12	06	06	19	17	20	20
SMWM	14	15	14	11	07	06	19	18	22	21
SDJM	18	18	14	13	07	09	20	20	22	21





## Raw Data and Change Scores, Cont'd.

## C. Change Scores: Subscales.

	SAV	Ex	Fr	Spon	Sr	Sa	Nm	Sy	Aa	Cic	Tot
EDGMJ	01	04	01	02	00	02	01	02	04	01	18
EMFEF	07	05	05	06	04	07	01	02	09	05	51
EMKGR	03	07	01	00	05	09	03	01	00	04	33
EMRWM	02	05	02	04	00	00	00	00	03	00	16
FZKS	01	03	01	01	00	01	03	01	01	01	13
GMLAT	03	08	03	03	04	08	00	00	04	07	40
HABJS	03	0101	03	03	04	00	00	01	06	02	23
INSMM	00	04	03	01	01	04	01	00	02	05	21
KKOEK	03	00	00	05	05	03	01	02	02	03	24
LLLIH	05	10	07	08	04	04	03	03	05	10	59
MESGG	00	01	03	02	00	03	04	01	01	03	18
PMCFL	02	04	02	01	04	01	01	01	03	00	19
SKSST	02	02	03	01	00	02	00	00	03	03	16
TFDEC	04	05	01	02	02	05	04	01	02	03	29
ASLK	01	03	00	01	03	03	04	00	02	01	18
CTBJE	00	00	01	02	02	02	02	00	04	01	14
EGCC	01	01	00	01	00	03	01	00	02	01	10
FMSRN	01	03	01	01	00	00	01	00	01	01	09
HMDCW	01	05	03	03	02	04	03	01	01	03	26
JMEM	02	01	00	01	01	02	01	01	01	01	11
JMLC	02	01	03	01	01	01	01	00	01	01	12
JMTDS	03	04	04	03	00	01	02	01	01	05	24
KSWK	01	00	00	01	00	04	00	00	00	01	07
MBVHA	03	05	01	02	03	04	03	01	01	01	24
MDSJH	01	03	01	01	01	02	01	00	04	03	17
MMFTA	02	02	00	01	01	01	02	00	02	00	11
MSWM	01	00	02	01	02	01	03	01	01	01	13
SDJM	00	00	02	02	02	00	01	02	00	01	10



## APPENDIX E

### INELIGIBLE DATA





## PERSONAL ORIENTATION INVENTORY

By  
**EVERETT L. SHOSTROM**

PUBLISHED BY

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## SCORES

0. NA \_\_\_\_\_  
1. TI \_\_\_\_\_  
2. TC \_\_\_\_\_  
3. O \_\_\_\_\_  
4. I \_\_\_\_\_  
5. SAV \_\_\_\_\_  
6. Ex \_\_\_\_\_  
7. Fr \_\_\_\_\_  
8. S \_\_\_\_\_  
9. Sr \_\_\_\_\_  
10. Sa \_\_\_\_\_  
11. Nc \_\_\_\_\_  
12. Sy \_\_\_\_\_  
13. A \_\_\_\_\_  
14. C \_\_\_\_\_

571 #1

Name IEP WM

Age \_\_\_\_\_ Date \_\_\_\_\_ Sex ☒ M ☐ F

Married ☒ Single ☐ Divorced ☐ Widowed ☐

Number of years of school completed \_\_\_\_\_

Religious preference \_\_\_\_\_

Occupation \_\_\_\_\_

1	A	B	26	A	B	51	A	B	76	A	B	101	A	B	126	A	B
2			27			52			77			102			127		
3			28			53			78			103			128		
4			29			54			79			104			129		
5			30			55			80			105			130		
6	A	B	31	A	B	56	A	B	81	A	B	106	A	B	131	A	B
7			32			57			82			107			132		
8			33			58			83			108			133		
9			34			59			84			109			134		
10			35			60			85			110			135		
11	A	B	36	A	B	61	A	B	86	A	B	111	A	B	136	A	B
12			37			62			87			112			137		
13			38			63			88			113			138		
14			39			64			89			114			139		
15			40			65			90			115			140		
16	A	B	41	A	B	66	A	B	91	A	B	116	A	B	141	A	B
17			42			67			92			117			142		
18			43			68			93			118			143		
19			44			69			94			119			144		
20	A	B	45	A	B	70	A	B	95	A	B	120	A	B	145	A	B
21			46			71			96			121			146		
22			47			72			97			122			147		
23			48			73			98			123			148		
24			49			74			99			124			149		
25			50			75			100			125			150		



571 #1

Name ASWK Last First Middle

Age      Date      Sex ☒ M ☐ F

Married ☒ Single ☐ Divorced ☐ Widowed ☐

Number of years of school completed     

Religious preference     

Occupation     

## SCORES

0. NA	7. Fr
1. TI	8. S
2. TC	9. Sr
3. O	10. Sa
4. I	11. Nc
5. SAV	12. Sy
6. Ex	13. A
	14. C

## PERSONAL ORIENTATION INVENTORY

By  
**EVERETT L. SHOSTROM**

PUBLISHED BY  
**EDUCATIONAL AND INDUSTRIAL TESTING SERVICE**

1	A	B	26	A	B	51	A	B	76	A	B	101	A	B	126	A	B
2	A	B	27	A	B	52	A	B	77	A	B	102	A	B	127	A	B
3	A	B	28	A	B	53	A	B	78	A	B	103	A	B	128	A	B
4	A	B	29	A	B	54	A	B	79	A	B	104	A	B	129	A	B
5	A	B	30	A	B	55	A	B	80	A	B	105	A	B	130	A	B
6	A	B	31	A	B	56	A	B	81	A	B	106	A	B	131	A	B
7	A	B	32	A	B	57	A	B	82	A	B	107	A	B	132	A	B
8	A	B	33	A	B	58	A	B	83	A	B	108	A	B	133	A	B
9	A	B	34	A	B	59	A	B	84	A	B	109	A	B	134	A	B
10	A	B	35	A	B	60	A	B	85	A	B	110	A	B	135	A	B
11	A	B	36	A	B	61	A	B	86	A	B	111	A	B	136	A	B
12	A	B	37	A	B	62	A	B	87	A	B	112	A	B	137	A	B
13	A	B	38	A	B	63	A	B	88	A	B	113	A	B	138	A	B
14	A	B	39	A	B	64	A	B	89	A	B	114	A	B	139	A	B
15	A	B	40	A	B	65	A	B	90	A	B	115	A	B	140	A	B
16	A	B	41	A	B	66	A	B	91	A	B	116	A	B	141	A	B
17	A	B	42	A	B	67	A	B	92	A	B	117	A	B	142	A	B
18	A	B	43	A	B	68	A	B	93	A	B	118	A	B	143	A	B
19	A	B	44	A	B	69	A	B	94	A	B	119	A	B	144	A	B
20	A	B	45	A	B	70	A	B	95	A	B	120	A	B	145	A	B
21	A	B	46	A	B	71	A	B	96	A	B	121	A	B	146	A	B
22	A	B	47	A	B	72	A	B	97	A	B	122	A	B	147	A	B
23	A	B	48	A	B	73	A	B	98	A	B	123	A	B	148	A	B
24	A	B	49	A	B	74	A	B	99	A	B	124	A	B	149	A	B
25	A	B	50	A	B	75	A	B	100	A	B	125	A	B	150	A	B













**B29991**